HITACHI

• SERVICE MANUAL

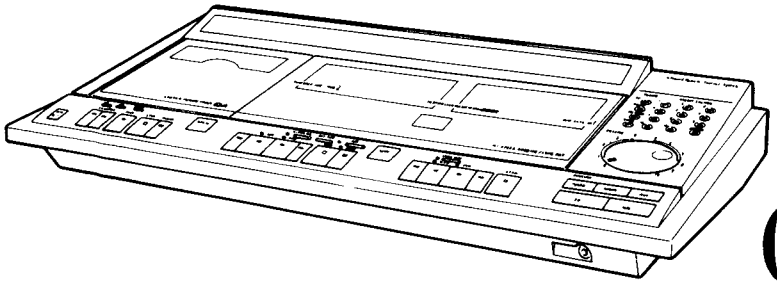
TY | No. 571EF

MX-W50

(US,CS,ES,VS,BK,SA,KS,ZS,EW)

AQ07

TAPE1: HTY-3300DH (PLAY)
TAPE2: HTY-3600DH (REC/PLAY)



CD Slimline System

CONTENTS

SPECIFICATIONS	2
DISASSEMBLY	3
GENERAL ADJUSTMENT INSTRUCTIONS	9
LUBRICATION	20
MAINTENANCE	20
EXPLANATION OF NEW CIRCUITS	21
EXPLANATION OF NEW PARTS OF CD UNIT	22
DIFFERENCE FOR DESTINATION	23
IC INTERNAL BLOCK DIAGRAM	26
VOLTAGE CHART	27
PRINTED WIRING BOARD	29-34
CIRCUIT DIAGRAM	35-43
BLOCK DIAGRAM	44
WIRING DIAGRAM	45
EXPLODED VIEW	
(Cabinet)	47
(Cabinet, Unit mechanism)	49
(Cassette Chassis)	50
REPLACEMENT PARTS LIST	51
WARNING LABEL	61

TABLE DES MATIERES

CARACTÉRISTIQUES TECHNIQUES	3
DÉMONTAGE	4
INSTRUCTION GÉNÉRALES DE RÉGLAGE	13
LUBRIFICATION	20
ENTRETIEN	20
EXPLICATION DES NOUVEAUX CIRCUITS	21
EXPLICATION DES NOUVELLES PIÈCES DU LECTEUR CD	22
DIFFÉRENCE EN FONCTION DU PAYS DE DESTINATION	23
SCHÉMA FONCTIONNEL INTÉRIEUR IC	26
TABLEAU DES TENSION	27
PLAN DE BASE	29-34
PLAN DE CIRCUIT	35-43
SCHÉMA	44
SCHÉMA DE CÂBLAGE	45
VUE EXPLOSEE	
(Coffret)	47
(Coffret, Méchanisme de barre)	49
(Chassis de Cassette)	50
TABLEAU DES PIÈCES	51
ETIQUETTE D'AVERTISSEMENT	61

CAUTION
DANGER
Invisible laser radiation when open and interlocks failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

GEFAHR
Unsichtbare Laser-Strahlung wenn Interlock (Blockierung) funktionsuntüchtig oder abgeschaltet. UNMITTELBAREN KONTAKT MIT DEM STRAHL UNBEDIGT VERMEIDEN.

DANGER
Faire très attention aux radiations émises par le faisceau laser invisible au défaillance du verrouillage. NE JAMAIS S'EXPOSER DIRECTEMENT AU FAISCEAU.

VARNING
När apparaten öpponats och skyddsanordningen eller satts ur funktion förekommer osynlig laser strålning. UNDVIK DIREKT BESTRÅLNING.

ADVARSEL
Når apparatet åbnes og beskyttelsesanordningen ikke virker eller sættes un af funktion, forekommer der usynlig laserståling. UNDGÅ DIREKTE BESTRÅLING.

ADVERSEL
Når denne delen er åpen som følge av at låsen er utkoplet eller ikke fungerer, eksisterer det usynlig laserstråling. UNNGÅ Å BLI UTSATT FOR DIREKTE BESTRÅLING!

VAROITUS
Laite lähettää näkymätöntä lasersäteilya, kun se avataan ja kun sisäiset turvalukot eivät toimi. VARO JOUTUMASTA ALTTIIKSI SÄTEILYLLE.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

STEREO CASSETTE RECEIVER/COMPACT DISC PLAYER

August 1987 TOYOKAWA WORKS

SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with ⚠ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

● GENERAL

Power supply	AC: 120V 60 Hz [for US, CS] AC: 220V, 50 Hz [for ES, VS, KS, ZS] AC: 240V, 50 Hz [for BK, SA] AC: 110—120V/200—220V/230—240V, 50/60 Hz [for EW]
Power consumption:	250W
Dimensions:	621 (W) x 133 (H) x 368 (D) mm
Weight:	8.5 kg

● AMPLIFIER SECTION

Power output:	50 W/ch + 50 W/ch (8 ohms, 1 kHz, T.H.D. 0.7%)
Total harmonic distortion:	0.5% (at 1/2 power output)
Input sensitivity/Impedance:	PHONO: 3 mV/47 khoms AUX: 90mV/22 kohms
Load impedance:	Speaker: 8—16 ohms Headphones: more than 8 ohms
S/N ratio (IHF A network):	PHONO: 73 dB AUX: 87 dB

● TUNER SECTION

FM

Frequency range:	87.9—107.9 MHz (200 kHz steps) [for US, CS] 87.5—108.0 MHz (50 kHz steps) [except US, CS]
Sensitivity:	1.5 μV (S/N 26 dB)
S/N ratio:	MONO: 72 dB (IHF) 63 dB (IEC, unweighted, Q-peak) 60 dB (IEC, weighted, Q-peak) STEREO: 68 dB (IHF) 58 dB (IEC, unweighted, Q-peak) 55 dB (IEC, weighted, Q-peak)
FM selectivity:	60 dB (± 300 kHz)
Stereo separation:	40 dB (1 kHz)

MW (AM)

Frequency range:	530—1,710 kHz (10 kHz steps) [for US, CS] 522—1,611 kHz (9 kHz steps) 530—1,710 kHz (10 kHz steps) [for EW] 522—1,611 kHz (9 kHz steps) [except US, CS, EW]
Sensitivity:	40 μV (S/N 26 dB)
S/N ratio:	50 dB

LW [for BK, ES, VS]

Frequency range:	153—281 kHz (1 kHz steps)
Sensitivity:	400 μV (S/N 26 dB)

● TAPE DECK SECTION

Track system:	4 tracks 2 channels stereo
Recording system:	AC bias
Tape:	Normal, Chrome, Metal
Frequency response:	Normal: 40 — 14,000 Hz CrO_2: 40 — 15,000 Hz Metal: 40 — 16,000 Hz

● CD PLAYER SECTION

Playing time:	Approx. 60 minutes/one side
Diameter:	120 mm
Sampling frequency:	44.1 kHz
Quantization number:	16 bit linear/channel
Frequency response:	20 — 20,000 Hz

Specifications are subject to change without notice for performance improvement.

PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

1. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnés du symbole ⚠ dans le plan de circuit et sur le plan de base.
2. Avant de retourner l'appareil répare au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

CARACTÉRISTIQUES TECHNIQUES

● CARACTÉRISTIQUES GÉNÉRALES

Alimentation:	Secteur alternatif 120V, 60 Hz [pour US, CS] Secteur alternatif 220V, 50 Hz [pour ES, VS, KS, ZS] Secteur alternatif 240V, 50 Hz [pour BK, SA] Secteur alternatif 110—120V/200—220V/230—240V, 50/60 Hz [pour EW]
Puissance consommée:	250 W
Dimensions:	621 (L) x 133 (H) x 368 (P) mm
Poids:	8.5 kg

● SECTION AMPLIFICATEUR

Puissance de sortie:	50 W/canal + 50 W/canal (8 ohms, 1 kHz, 0.7% D.H.T)
Distorsion harmonique total:	0.5% (à la moitié de la puissance de sortie)
Sensibilité/impédance d'entrée:	PHONO: 3 mV/47 K-ohms AUX: 90 mV/22 K-ohms
Impédance de charge:	Haut-parleur: 8 à 16 ohms Casque d'écoute: Mieux que 8 ohms
Rapport S/B (réseau A IHF):	PHONO: 73 dB AUX: 87 dB

● SECTION TUNER

FM

Gamme de fréquences:	87.9—107.9 MHz (pas de 200 kHz) [pour US, CS] 87.5—108.0 MHz (pas de 50 kHz) [sauf US, CS]
Rapport S/B:	MONO: 72 dB (IHF) 63 dB (IEC, non pondéré, crête Q) 60 dB (IEC, pondéré, crête Q) STEREO: 68 dB (IHF) 58 dB (IEC, non pondéré, crête Q) 55 dB (IEC, pondéré, crête Q)
Sélectivité FM:	60 dB (± 300 kHz)
Séparations stéréo:	40 dB (1 kHz)

PO (AM)

Gamme de fréquences:	530—1710 kHz (pas de 10 kHz) [pour US, CS] 522—1611 kHz (pas de 9 kHz) 530—1710 kHz (pas de 10 kHz) [pour EW] 522—1611 kHz (pas de 9 kHz) [sauf US, CS, EW]
Sensibilité:	40 μV (rapport S/B 26 dB)
Rapport S/B:	50 dB

GO [pour BK, ES, VS]

Gamme de fréquences:	153—281 kHz (pas de 1 kHz)
Sensibilité:	400 μV (rapport S/B 26 dB)

● SECTION PLATINE-CASSETTE

Système de pistes:	4 pistes, 2 canaux stéréo
Système d'enregistrement:	Polarisation c.a.
Bande:	Normale, chrome, Métal
Rèponse en fréquence:	Normale: 40 à 14000 Hz CrO_2: 40 à 15000 Hz Métal: 40 à 16000 Hz

● SECTION LECTEUR DE DISQUE COMPACT

Durée de lecture	Environ 60 mn/face
Diamètre:	120 mm
Fréquence d'échantillonnage:	44,1 kHz
Nombre de numération:	16 bits/canal
Réponse en fréquence:	20 à 20000 Hz

Les caractéristiques techniques peuvent être modifiées sans préavis pour améliorations des performance.

DISASSEMBLY

1. Upper Case (Fig. 1, 2)
Remove fourteen screws ① and three screws ② (Fig. 1). Press the CD Eject button and cassette Eject button. After the CD door and cassette door have been opened remove the upper case by lifting upward (Fig. 2).

2. CD Door (Fig. 2)
After the upper case has been removed, press C and D in the direction of the arrow and remove the stopper. Then press A and B in the direction of the arrow and remove the stopper. Remove the CD door by lifting upward.

3. Cassette Door (Fig. 2)
After the upper case has been removed, press G and H in the direction of the arrow and remove the stopper. Then press E, F and I in the direction of the arrow and remove the stopper. Remove the cassette door by lifting upward.

4. Clamper (Fig. 3)
Lift out the clamper while expanding the flexible rib in the direction of the arrow.

NOTE: Remove this clamper when adjusting using the disc at the CD Player Section.

5. FL METER P.W.B. (Fig. 4, 6)
Remove two screws ③, four connector Ⓐ (Fig. 4), and one connector Ⓑ on the Main P.W.B. (Fig. 6).

6. Remote Control Receiver Unit (Fig. 4)
Pull the unit in the direction of arrow J and remove.

7. Indicator P.W.B. (Fig. 4)
Remove the Volume knob in the direction of arrow K and lift out the rear Indicator P.W.B. in the direction of arrow L.

8. TS P.W.B. (Fig. 4, 6)
Remove two connector Ⓒ (Fig. 4) and two connectors Ⓓ (Fig. 6).

9. VR P.W.B. (Fig. 4, 6)
After removing the TS P.W.B., remove one screw ④, one screw ⑤ (Fig. 4) and two connectors Ⓔ (Fig. 6).

10. Cassette Chassis (Fig. 5, 6)
TAPE 1: Remove three screws ⑥ (Fig. 5) and three connector Ⓕ (Fig. 6)

TAPE 2: Remove three screws ⑦-1, one screw ⑦-2 (Fig. 5) and four connector Ⓖ (Fig. 6)

11. Main P.W.B. (Fig. 5, 6)
Remove three screws ⑧ and remove the Main P.W.B. in the direction of arrow M.

12. Key P.W.B. (Fig. 7)
Pull two claws in the direction of arrow N and remove. Remove two connector Ⓗ.

13. Laser, Open/Close Switch P.W.B. (Fig. 7)
Pull two claws in the direction of arrow O and remove by lifting upward. Remove one connector Ⓘ.

14. Power Supply P.W.B. (Fig. 7)
Remove one screw ⑨.

15. Power Supply Transformer (Fig. 6, 7)
Remove six screws ⑩ (Fig. 7) and one connector Ⓙ (Fig. 6). (Wiring is connected to the Power Supply P.W.B., so remove the Power Supply Transformer together with the Power Supply P.W.B.)

16. CD Unit Mechanism (Fig. 8)
Remove four screws ⑪, two connectors Ⓚ and the flexible P.W.B.

17. PX P.W.B. (Fig. 6, 8)
Pull four claws (Fig. 8) and two connectors Ⓛ (Fig. 6).

DÉMONTAGE

1. Boîtier supérieur (Fig. 1, 2)
Enlever 14 vis ① et 3 vis ② (Fig. 1). Appuyer sur la touche d'éjection CD et la touche d'éjection de cassette. Après avoir ouvert le couvercle CD et le couvercle de cassette, enlever le boîtier supérieur en le soulevant vers le haut (Fig. 2).

2. Couvercle CD (Fig. 2)
Après avoir enlevé le boîtier supérieur, appuyer sur C et D dans la direction de la flèche et enlever la rondelle d'arrêt. Puis, appuyer sur A et B dans la direction de la flèche et enlever la rondelle d'arrêt. Enlever le couvercle CD en le soulevant vers le haut.

3. Couvercle de cassette (Fig. 2)
Après avoir enlevé le boîtier supérieur, appuyer sur G et H dans la direction de la flèche et enlever la rondelle d'arrêt. Puis appuyer sur E, F et I dans la direction de la flèche et enlever la rondelle d'arrêt. Enlever la trappe de cassette en la soulevant vers le haut.

4. Bride de fixation (Fig. 3)
Dégager vers le haut la bride de fixation tout en tirant le rebord flexible dans la direction de la flèche.

Remarque: Retirer ce serre-fil avant d'effectuer le réglage à l'aide d'un disque de la section lecteur CD.

5. Plaquette de circuits imprimés de compteur FL (Fig. 4, 6)
Enlever 2 vis ③, 4 connecteurs Ⓐ (Fig. 4), et 1 connecteur Ⓑ sur la plaquette de circuits imprimés principale (Fig. 6).

6. Unité de réception de télécommande (Fig. 4)
Tirer l'unité dans la direction de la flèche J et l'enlever.

7. Plaquette de circuits imprimés des indicateurs (Fig. 4)
Enlever le bouton de volume dans la direction de la flèche K et dégager la plaquette arrière de circuits imprimés des indicateurs dans la direction de la flèche L.

8. Plaquette de circuits imprimés TS (Fig. 4, 6)
Enlever 2 connecteurs Ⓒ (Fig. 4) et 2 connecteurs Ⓓ (Fig. 6).

9. Plaquette de circuits imprimés VR (Fig. 4, 6)
Après avoir enlevé la plaquette de circuits imprimés TS, enlever 1 vis ④, 1 vis ⑤ (Fig. 4) et 2 connecteurs Ⓔ (Fig. 6).

10. Châssis de cassette (Fig. 5, 6)
TAPE 1: Enlever 3 vis ⑥ (Fig. 5) et 3 connecteurs Ⓕ (Fig. 6).
TAPE 2: Enlever 3 vis ⑦-1, 1 vis ⑦-2 (Fig. 5) et 4 connecteurs Ⓖ (Fig. 6).

11. Plaquette de circuits imprimés principale (Fig. 5, 6)
Enlever 3 vis ⑧ et enlever la plaquette de circuits imprimés principale dans la direction de la flèche M.

12. Plaquette de circuits imprimés de clés (Fig. 7)
Tirer les deux griffes dans la direction de la flèche N et retirer la plaquette. Enlever les deux connecteurs Ⓗ.

13. Plaquette de circuits imprimés de commutateur Laser, ouvrir/fermer (Fig. 7)
Tirer les deux griffes dans la direction de la flèche O et enlever la plaquette en la tirant vers le haut.
Enlever le connecteur Ⓘ.

14. Plaquette de circuits imprimés d'alimentation (Fig. 7)
Enlever 1 vis ⑨.

15. Transformateur d'alimentation (Fig. 6, 7)
Enlever 6 vis ⑩ (Fig. 7) et 1 connecteur Ⓙ (Fig. 6). (Comme les câbles sont reliés à la plaquette de circuits imprimés d'alimentation, enlever le transformateur d'alimentation avec la plaquette de circuits imprimés d'alimentation.)

16. Mécanisme d'unité CD (Fig. 8)
Enlever 4 vis ⑪, 2 connecteurs Ⓚ et la plaquette de circuits imprimés flexible.

17. La plaquette de circuits imprimés PX (Fig. 6, 8)
Tirer les qurtre griffes (Fig. 8) et 2 connecteurs Ⓛ (Fig. 6).

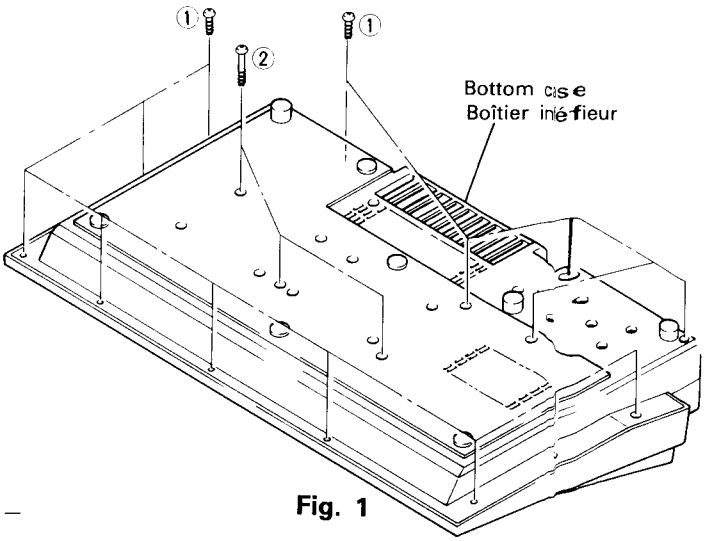


Fig. 1

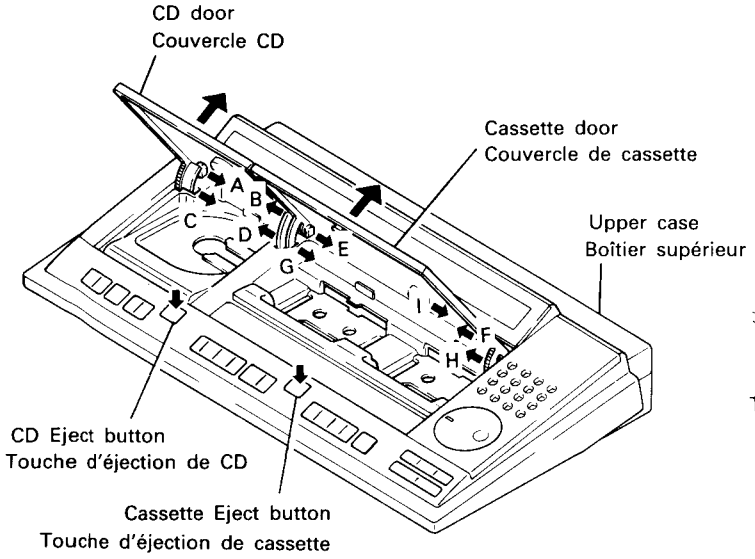


Fig. 2

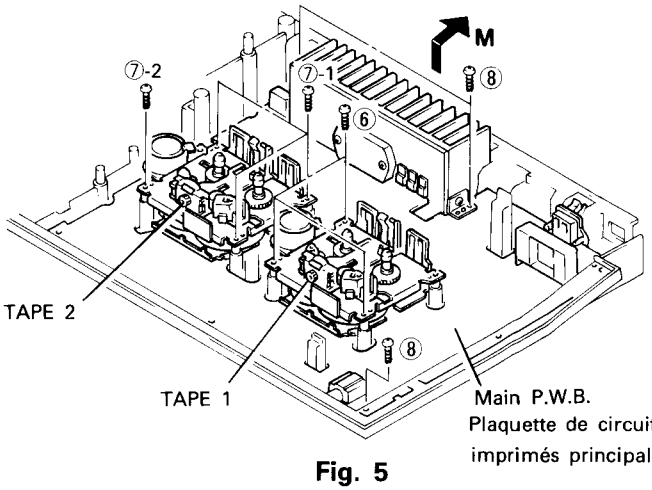


Fig. 5

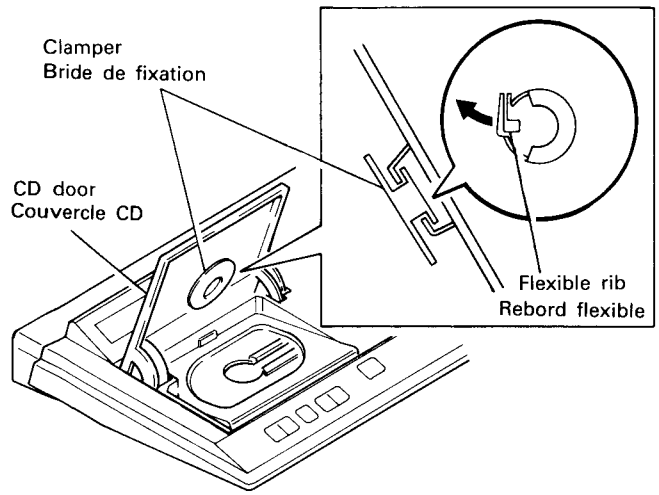


Fig. 3

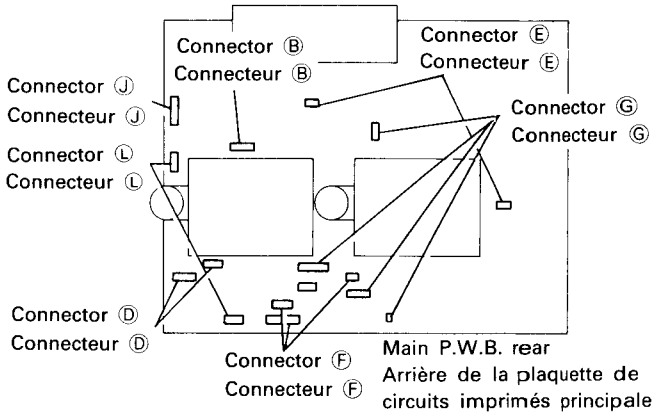


Fig. 6

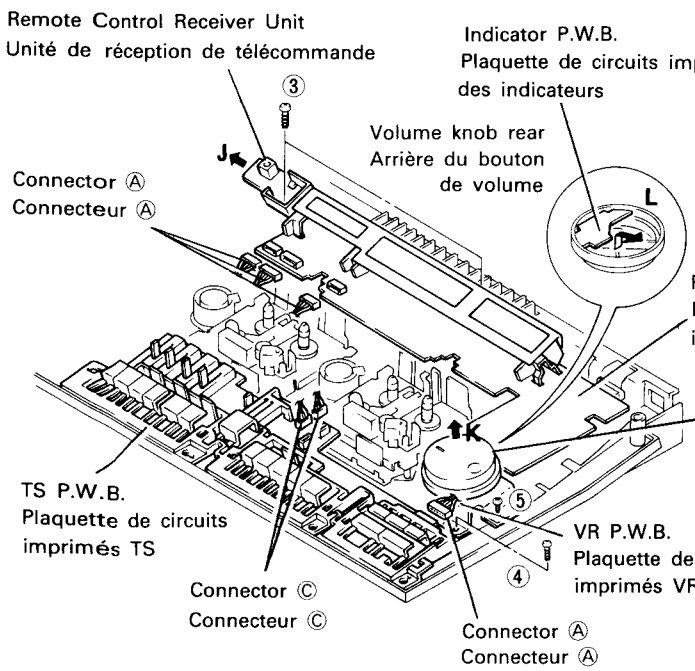


Fig. 4

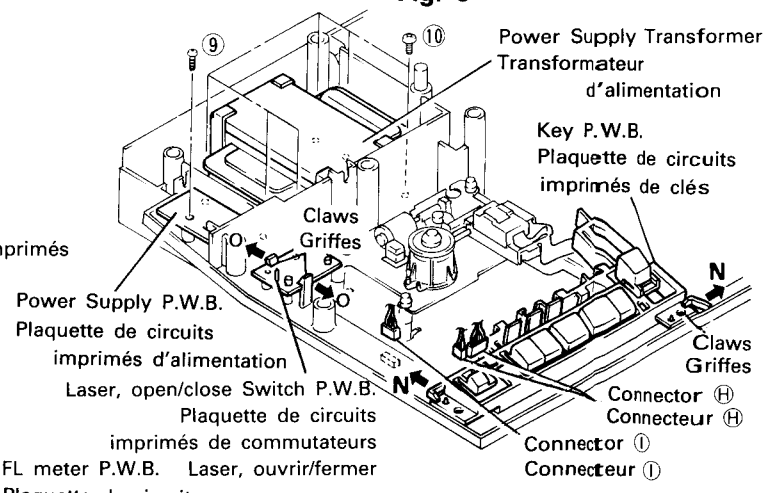


Fig. 7

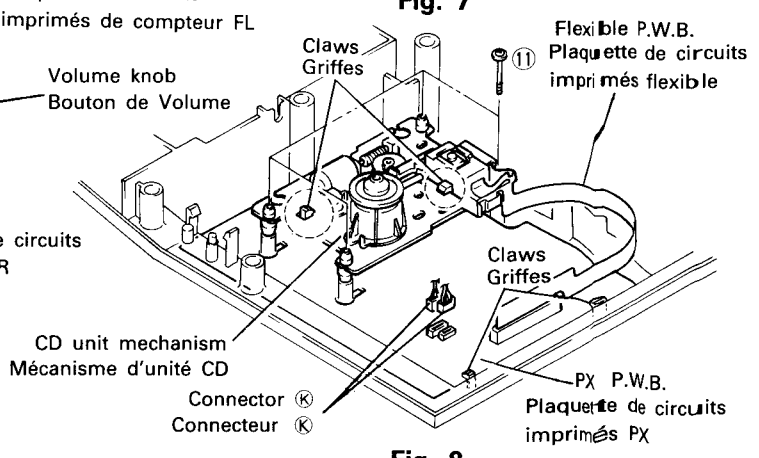


Fig. 8

18. Checking the Object Lens. (Fig. 9)

Make sure that no dust or grime gets on the object lens of the lens actuator. After a long period of use it is possible for this lens to get dirty or dusty. In such a case try to clean the front surface of the lens with a cotton applicator.

19. Laser Malfunction Check

The laser normally operates on a current of 40 — 80mA. If the laser circuit is measured and shows a current of 100 mA or more it may be assumed that the laser is defective.

20. Things to Keep In Mind During Servicing (Fig. 10)

(1) Regarding the Semiconductor Laser

The semiconductor laser is extremely sensitive to electrostatic disruption and surge current. Be very careful not to allow the hand or any tools ever to come into contact with the terminals of either the laser or the flexible P.W.B..

Furthermore, the Current-Light Intensity Characteristic once a certain amperage threshold is exceeded, rises sharply (as can be seen in Fig. 10). This current threshold is slightly different for each laser unit. Consequently, during operations such as the replacement of the Unit Mechanism Assembly, when setting the intensity of the laser be sure to turn the Semi-variable Resistor VR901 as far to the right as it will go to set it off once, and then raise the current to the level which is specified.

(2) Handling of the Unit Mechanism Assembly (Fig. 11)

When handling the Pickup Mechanism Assembly and the Unit Mechanism Assembly use a Ground Ring of the kind pictured in Fig. 11.

(A ground wire can be made with ordinary lead wire.)

(3) Precautions During Replacement of Parts.

1) Protective sheets (against static electricity) are stuck to the service parts of the Unit Mechanism. Never remove these sheets under any circumstances until assembly is completed.
2) If high temperature is applied to the motor lead wire terminal, for example by soldering, this may cause damage to the motor.
3) Make sure that screws are set in tightly. If screws are loose, this may lead to defective disc tracking performance.
4) When installing the DC Motor Assembly, (Slide Motor) be careful not to damage the worm gear. Such damage will become a source of noise. After installation, check the play between the worm gear and the transmission gear. If there is no play move the DC Motor Assembly outward.
5) The DC Motor (D2) and the Turntable are replaced in the following manner:

   (1) Lift the turntable off perpendicularly to the Unit Plate.
   (2) When attaching the turntable, adjust the height using the Height Adjustment Jig (Fig. 13). At this time avoid placing undue lateral stress on the shaft of the DC Motor (D2).
   (3) During the overhauling of the DC Motor (D2), do not apply excessive force in the direction B. If the C portion of the Unit Plate is deformed this could cause eye-pattern deterioration. (Fig. 14)

   NOTE: Once the Turntable has been Removed, Do Not Use It Again.

6) Lead Bar Check
   If the lead bar is loose interference with the disc tracking function may result. Therefore check to make sure that the lead bar does not move in the direction indicated by D. If it is found to move, correct position of the Bar Plate (B) by bending in direction E with pliers, then reassemble. (Fig. 15)
7) Since the Flexible P.W.B. can be cut easily make sure not to use excessive force when servicing the Unit Mechanism Assembly (replacing parts). Ground the flexible P.W.B. after it is removed by clamping it with a metal clamp or similar metal object. (Fig. 16)

21. Safety Devices (Fig. 17)

This equipment has a safety device built in to the disc cover which automatically cuts off laser light as soon as the cover is opened. Be careful not to stick pins or other foreign objects into this area. If laser light comes out accidentally, this is very dangerous.

18. Vérification de la lentille optique (Fig. 9)

S'assurer qu'il n'y a pas de poussière ou de saletés sur l'actionneur de lentille de la lentille optique. Après une longue durée d'utilisation, il est possible que la lentille soit sale. Si tel est le cas, nettoyer la surface de la lentille à l'aide d'un coton-tige.

19. Vérification du fonctionnement du laser

Le laser fonctionne normalement sur un courant de 40 — 80 mA. Si le circuit laser est mesuré et indique un courant de 100 mA ou plus, on peut en déduire que le laser ne fonctionne pas correctement.

20. Points importants lors de l'entretien (Fig. 10)

(1) En ce que concerne le laser à semiconducteur

Le laser à semiconducteur est très sensible aux perturbations électrostatiques et au courant de choc. Bien veiller à ce que ni vos mains ni aucun outil ne viennent en contact avec les bornes du laser ou de la plaquette flexible.

De plus, les caractéristiques d'intensité courant-lumière augmentent considérablement, une fois un certain seuil d'ampérage atteint (comme indiqué sur la Fig. 10). Ce seuil de courant varie légèrement selon l'unité laser. En conséquence, lors d'opérations telles que le remplacement de l'ensemble du mécanisme d'unité, au moment du réglage de l'intensité du laser, bien veiller à tourner la résistance semivariable VR901 à fond à droite, puis augmenter le courant au niveau spécifié.

(2) Maniement de l'ensemble du mécanisme de l'unité (Fig. 11)

Lors du maniement de l'ensemble du mécanisme de la tête de lecture et de l'ensemble du mécanisme de l'unité, utiliser une bague de mise à la terre du type de celui illustré sur la Fig. 11.

(Un fil de masse peut être fait avec du fil conducteur ordinaire.)

(3) Précautions lors du remplacement de pièces

1) Des films protecteurs sont collés aux pièces d'entretien du mécanisme de l'unité. Ne jamais enlever ces films jusqu'à ce que l'assemblage soit terminé.
2) Si une température élevée est appliquée sur la borne du fil conducteur de moteur - par exemple, par soudage - cela peut provoquer des dommages au moteur.
3) Veiller à ce que les vis soit bien serrées. Si les vis ne sont pas bien serrées, cela peut provoquer des erreurs de lecture de piste du disque.
4) Lors de la pose de l'ensemble moteur CC, veiller à ne pas endommager la vis sans fin, car cela pourrait être source de bruit. Après la pose, vérifier le jeu entre la vis sans fin et l'engrenage de transmission. S'il n'y a pas de jeu, déplacer l'ensemble moteur CC vers l'extérieur.
5) Le moteur CC (D2) et le plateau d'entraînement sont remplacés de la manière suivante:

   (1) Dégager le plateau d'entraînement de la plaquette de l'unité en le soulevant perpendiculairement.
   (2) Lors de a pose du plateau d'entraînement, régler la hauteur à l'aide du gabarit de réglage de hauteur (Fig. 13). Eviter d'appliquer un effort latéral excessif sur l'axe du moteur CC (D2).
   (3) Lors du changement du moteur CC (D2), ne pas appliquer de force excessive dans la direction B. Si la partie C de la plaquette de l'unité est déformée, cela peut provoquer une détérioration de la forme d'onde (Fig. 14).

Remarque: ne pas réutiliser un plateau d'entraînement qui a été enlevé une fois.

6) Vérification de la barre d'avance
   Si la barre d'avance est lâche, cela peut affecter la lecture de piste du disque. Il faut donc vérifier que la barre ne se déplace pas dans la direction indiquée par D. Si tel est le cas, corriger la position de la plaquette de barre (B) en la courbant à l'aide de pinces dans la direction E, puis procéder au remontage (Fig. 15).
7) Etant donné que la plaquette flexible être facilement cassée, veiller à ne pas appliquer de force excessive lors de la réparation de l'ensemble du mécanisme de l'unité. Relier à la terre la plaquette flexible - après avoir enlevée - à l'aide d'une pince métallique ou d'un objet métallique similaire (Fig. 16).

21. Dispositifs de sécurité (Fig. 17)

Cet appareil est équipé d'un dispositif de sécurité qui coupe automatiquement le rayon laser dès l'ouverture de la porte du disque. Veiller à ne pas insérer d'objets métalliques pointus ou autres objets à cet endroit. Il y a risque de danger en cas de sortie accidentelle du rayon laser.

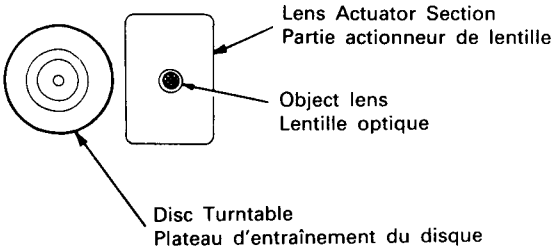


Fig. 9

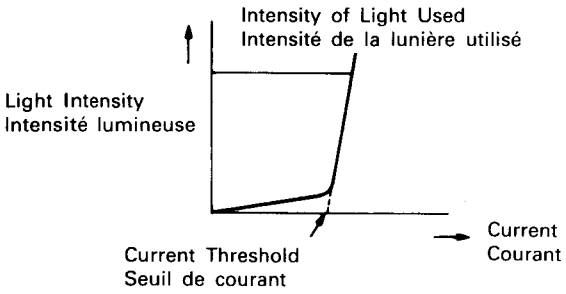


Fig. 10

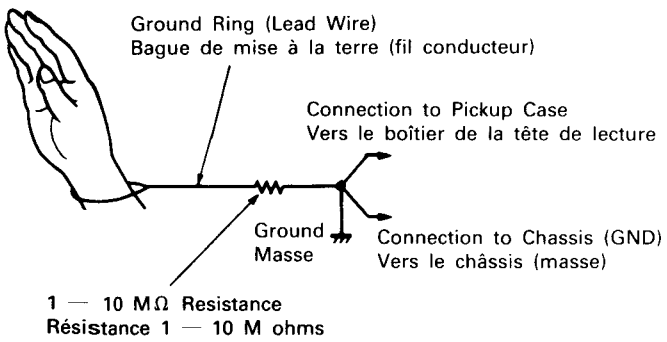

Ground Ring (Lead Wire)
Bague de mise à la terre (fil conducteur)
Connection to Pickup Case
Vers le boîtier de la tête de lecture
Ground
Masse
Connection to Chassis (GND)
Vers le châssis (masse)
1 — 10 MΩ Resistance
Résistance 1 — 10 M ohms

Fig. 11

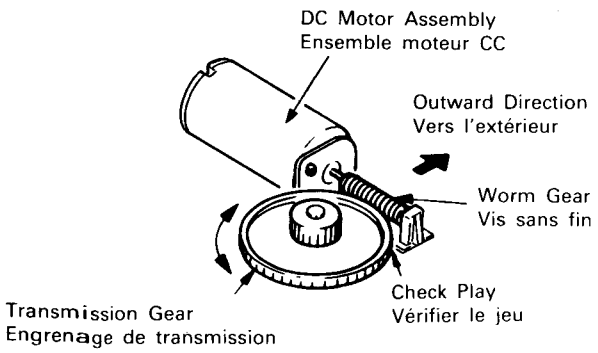


Fig. 12

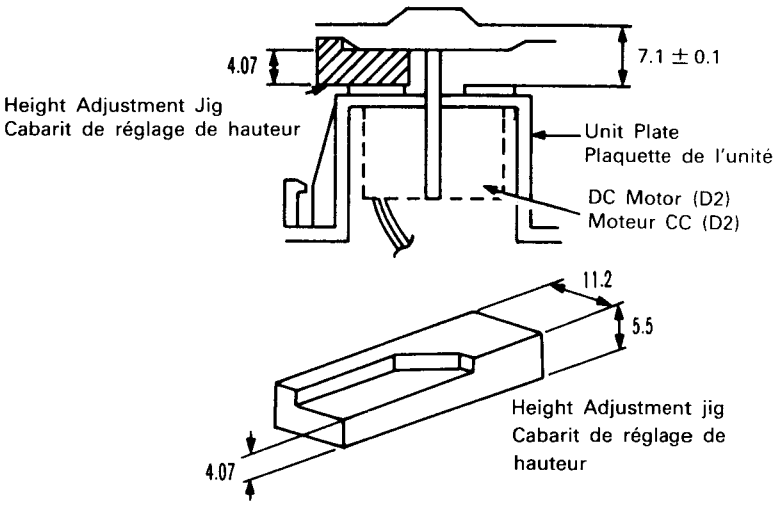


Fig. 13

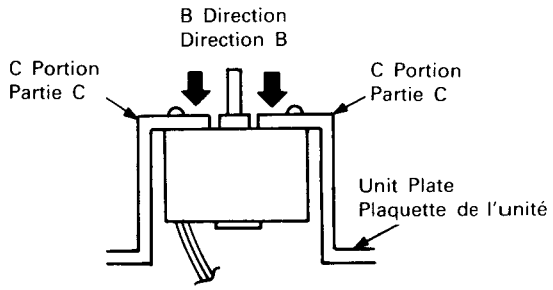


Fig. 14

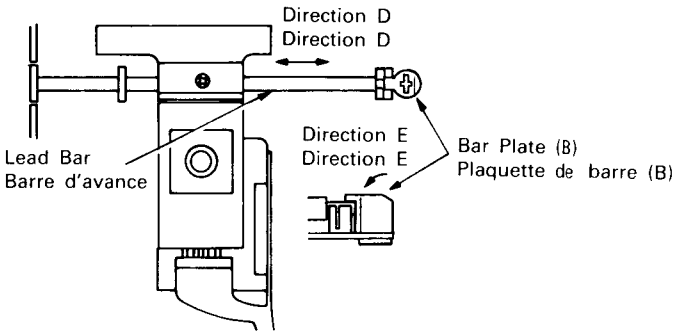


Fig. 15

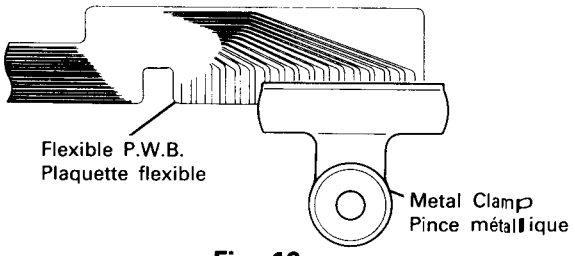


Fig. 16

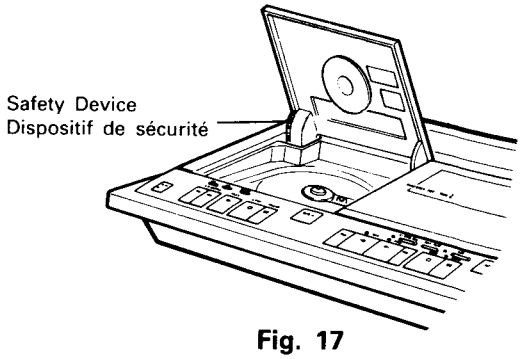


Fig. 17

GENERAL ADJUSTMENT INSTRUCTIONS

●RADIO SECTION

These adjustments are made after the Upper Case and the FL meter P.W.B. have been removed.

●Adjustment points

Perform adjustment at least 3 minutes after the power has been switched on.

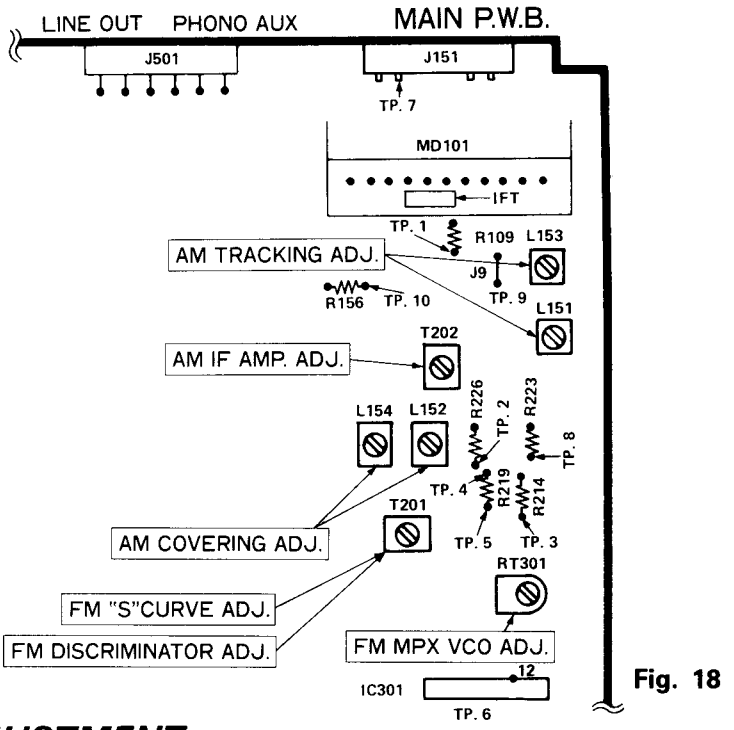


Fig. 18

FM TUNER ADJUSTMENT

FUNCTION: FM

FM MODE: MONO

Sweep Generator

Signal Generator

Oscilloscope

DC Null Meter

VTVM

Frequency Counter

Distortion Meter

Sequence		Connection		Setting		Adjust for	
		Input	Output	Tuning	Signal	Adjust	Indication
1	IF Amp.	TP. 1 100k 0.1 μ	TP. 2 100k 0.1 μ	—	10.7 MHz	FM IFT	(Note 1)
2	"S" curve		TP. 3 100k 0.1 μ	—	10.7 MHz	T201	(Note 2)
3	Discriminator	FM antenna 60dB 400Hz, 22.5Hz Dev.	TP.4 R219 TP. 5	98 MHz	98 MHz	T201	(Note 3)
4	MPX VCO	Antenna terminal (75 ohms) 60 dB Non Mod.	TP. 6 100k	89.9 MHz	89.9 MHz	RT301	19 kHz±50 Hz

Note 1: Apply low-input signals from a sweep generator (with a small amount of noise superimposed on IF waveform as in Fig. 19), and adjust the waveform until it becomes maximum and symmetrical.

Note 2: Cause and S curve to appear on the screen by T201 as shown in Fig. 20, and adjust it until points A and B are positioned symmetrically, and the A-B line becomes liner.

Note 3: Connect a DC null meter TP. 4 and TP. 5 then make adjustment until it reads 0 ± 20mV.

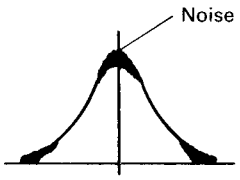


Fig. 19

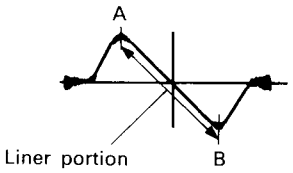


Fig. 20

AM TUNER ADJUSTMENT

FUNCTION: AM
MODULATION: 400Hz 30% Mod. 74dBμ/m

Sequence		Connection		Setting		Adjust for	
		Input	Output	Tuning	Signal	Adjust	Indication
1	IF AMP.	TP. 7 100k 0.1μ	TP. 8 100k 0.1μ	—	450kHz	T202	(Note 5)
2	Covering (Note 5)	Loop antenna	TP. 9 (MW) TP. 10 (LW)	(MW) 530kHz (for US, CS) 522kHz (except US, CS)	—	(MW) L152	1.3V ± 0.1V (for US, CS) 1.2V ± 0.1V (except US, CS) (Note 6)
				(LW) 153kHz	—	(LW) L154	1.2V ± 0.1V (Note 6)
3	Tracking	400Hz 30% Mod.	Audio output	(MW) 603kHz or 600kHz	(MW) 603kHz or 600kHz	L151	V max. (Note 7)
				(LW) 163kHz	(LW) 163kHz	L153	

Note 4: Adjust T202 so that the wareform shown in Fig. 21 is obtained. After adjustment, increase the sweep generator output and adjust so that portion A of the wareform shown in Fig. 22 is flat.

Note 5: Covering is factory preset. If it is touched erroneously, perform this procedure.

Note 6: Connect the DC volt meter to TP. 9, TP. 10 and adjust L 152, L 154.

Note 7: At first, set the input level to 74 dBμ/m. As the adjustment advances, reduce the input level to and allowable minimum level (approx. 60 dB), and repeat the adjustment until the maximum output is obtained at the specified frequency.

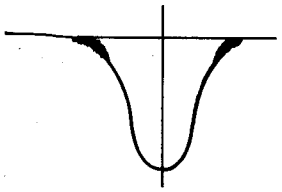


Fig. 21

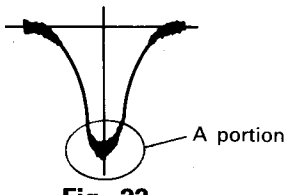


Fig. 22

Install a condenser of about 150 PF parallel to C425 in case the recording beat at MW and LW is too large.

TAPE DECK SECTION

● Adjustments points

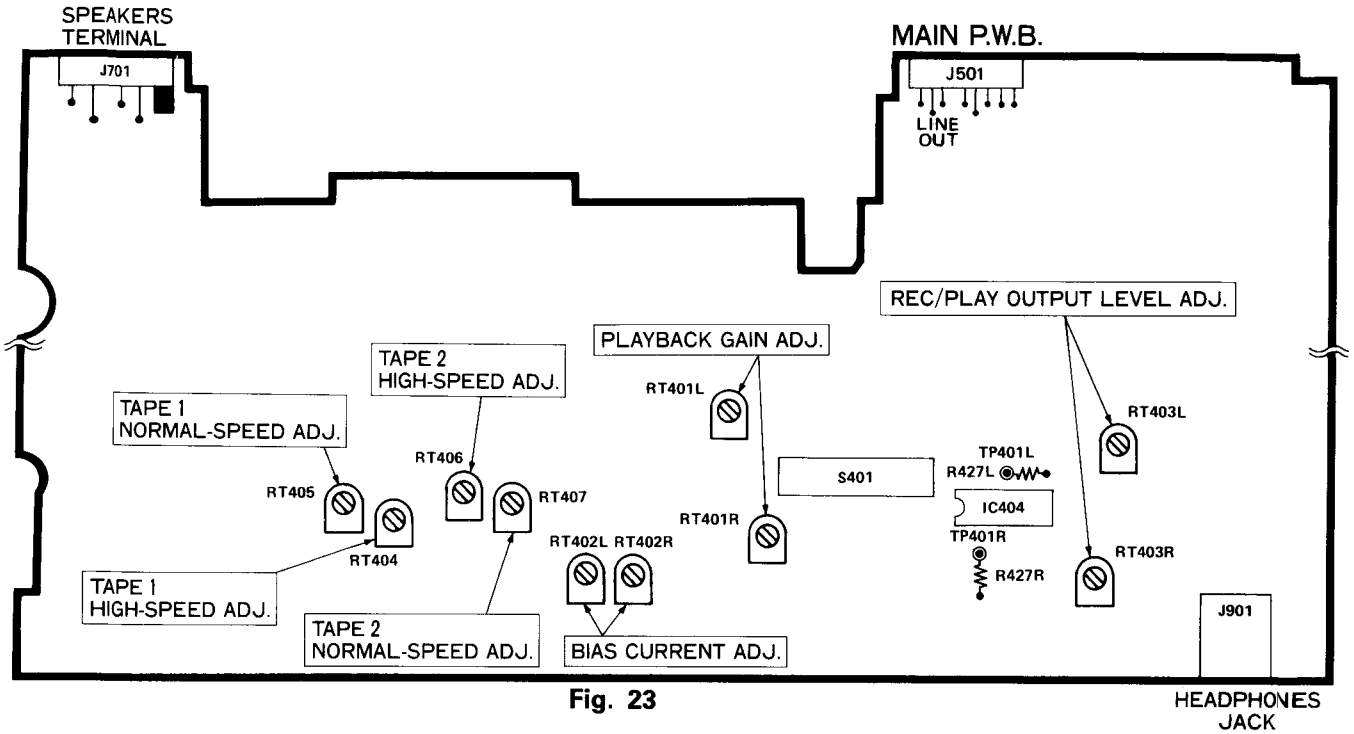


Fig. 23

● Instruments to be used

1. Audio oscillator
2. Electronic voltmeter
3. Attenuator
4. Frequency counter

● Jigs, Test and Check Tapes

1. Head mounting jig
2. 400 Hz, Dolby alignment tape
3. 10 kHz, azimuth alignment tape
4. 3,000 Hz, tape speed alignment tape
5. Mirror tape (for tape running check)
6. NORMAL tape (MAXELL UD I 90)
   CHROME tape (MAXELL UD II 90)
   METAL tape (MAXELL MX46)

● Position of knob

Match the position of switch to this shown in the table following unless otherwise specified.

Dolby NR switch	OFF

Open the cassette door and then clean the heads, pressure rollers and capstans using alcohol, then perform adjustment according to the following procedure.

1. Tape Speed Adjustment

Note:1 Always adjust the tape speed in order of (1) to (2). If adjustment is made in reverse order, the High-speed will be change.

Note:2 For Normal-Speed, High-Speed, switchover use the Micro-computer Test Program.

※Micro-computer Test Program

The Micro-computer Test is carried as follows; While depressing the STOP button and the FF button of TAPE 1, insert the power cord into a power-outlet socket. While in PLAY mode, Normal-Speed and High-Speed are varied by pressing the Play button. If the power is turned off the Micro-computer Test Program is cancelled.

(1) Normal-speed

Tape	Adjustment value	Adjustment point
Tape speed Alignment tape	3,000 +10 −0 Hz	RT405 (TAPE 1) RT407 (TAPE 2)

(2) High-speed

Tape	Adjustment value	Adjustment point
Tape speed Alignment tape	6,000 +20 −0 Hz	RT404 (TAPE 1) RT406 (TAPE 2)

Adjustment Procedure

Connect the frequency counter to the LINE OUT terminals and apply heat-run for 20 minutes or more. Then, playback the alignment tape in TAPE 1 and TAPE 2 and adjust the tape speed at the middle of the tape.

Note: Speed difference between TAPE 1 and TAPE 2 should be within 1%.

2. Azimuth Adjustment of Recording/Playback Head

Tape	Adjustment value	Adjustment point
Azimuth alignment tape	Maximum output	Azimuth adjustment screw

Adjustment procedure

Adjustment is made by connecting an electronic voltmeter to the LINE OUT terminals and playback the azimuth alignment tape. If there is a difference in the highest volume of the two channels, adjustment should be made to the left channel.

At this time check to see if the difference between channels is less than 2 dB. If it is greater, readjust again. After adjustment has been made apply screw lock.

(Please adjust both TAPE 1 and TAPE 2.)

3. Playback Gain Adjustment

Tape	Adjustment value	Adjustment point
Dolby alignment tape	300 mV	RT401LR

Adjustment procedure

Connect the electronic voltmeter to the LINE OUT terminals and playback the Dolby alignment tape. Adjust so that the reading of the electronic voltmeter indicates adjustment value.

4. Bias current Adjustment and REC/PLAY Output Level Adjustment

Set RT402L, R in the center position and record at the recording level shown in the table below to adjust for each tape, then check the playback level.

Order	Tape	Recording level			Playback level		Adjustment procedure
		Frequency (Hz)	Level	Adjustment point	Level	Adjustment point	
1	NORMAL tape	400/10K	300 mV −25 dB	ATT	Within ± 1 dB	RT402LR	(1)
2	NORMAL tape	400	300 mV −10 dB	ATT	Within ± 1 dB	RT403LR	(2)
3	NORMAL tape	400/10K	300 mV −25 dB	ATT	Within ± 1 dB	Check	(1)
4	CHROME tape	400/10K	300 mV −25 dB	ATT	Within ±3 dB	Check	(1)
5	METAL tape	400/10K	300 mV −25 dB	ATT	Within ±3 dB	Check	(1)

Adjustment procedure

(1) Adjustment of Bias current

1) Connect an electronic voltmeter to the LINE OUT terminals and, to the AUX IN terminals attach a audio oscillator by means of an attenuator. Set on "REC" and with the voltmeter set at 300 mV check the output of the audio oscillator. Next, check the attenuator and set to 300 mV − 25 dB. (Frequency: 400 Hz)
2) After recording at this setting next, set the audio oscillator to 10 kHz and record again.
3) Put the recording unit on "PLAY", take a reading of the output and check to ascertain if the difference in output between the two frequencies is within the range of ± 1 dB.
4) If the difference in output is not within the ± 1 dB range, make the appropriate adjustment of the RT402LR and then, once again as before, repeat the recording /playback test making sure the output is in the ± 1 dB range.

Note) When using CHROME and METAL tapes during checking, if the range gets outside of the specified ± 3 dB, readjust using NORMAL tape.

(2) Adjustment of REC/PLAY Output Level

1) Connect an electronic voltmeter to the LINE OUT terminals and an audio oscillator to the AUX IN terminals. Inputting a signal of 400 Hz set on recording mode and record, adjusting the output of the audio oscillator so that the voltmeter indicates 300 mV−10 dB.
2) Set on "PLAY" and check to see if the output is −10 dB ± 1 dB.
3) When the output difference is out of ± 1 dB, adjust RT403LR properly and repeat recording/playback in the same way to adjust so that the output difference is within ± 1 dB.

5. Cassette Chassis Checking and Adjustment

No.	Inspection Item	Reference Value	Remarks
1	Playback torque	35 — 75 g·cm	Cassettepack system Torque meter
2	FF/REW torque	more than 85 — 170 g·cm	Cassettepack system Torque meter
3	Supply back-tension	2.0 — 6.0 g·cm	Cassettepack system Torque meter
4	Tape drive force	Over 120 g	

INSTRUCTIONS GÉNÉRALES DE RÉGLAGE

● SECTION RADIO

Ces réglages s'effectuent après que le boîtier supérieur et la plaquette de circuits imprimés de compteur FL ont été enlevés.

● Emplacement de réglage

Commencer le réglage au moins trois minutes après mise sous tention.

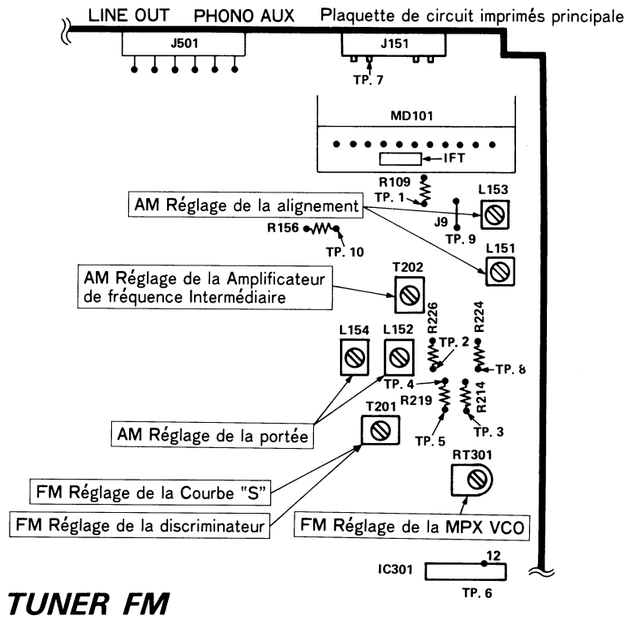


Fig. 24

REGLAGE DE TUNER FM

FONCTION: FM **FM MODE: NOMO**

Générateur de balayage | Générateur de signaux | Oscilloscope | Indicateur zero C.C.

Voltmètre électronique | Fréquencemètre | Distorsionmètre

Order		Connexion		Montage		Réglage pour	
		Entree	Sortie	Indicateur d'accord	Signal	Réglage	Indication
1	**Amplificateur de fréquence intermédiaire**	TP. 1 — 100k 0,1 µ	TP. 2 — 100k 0,1 µ	—	10,7 MHz	FM IFT	(Remarque 1)
2	**Courbe "S"**		TP. 3 — 100k 0,1 µ	—	10,7 MHz	T201	(Remarque 2)
3	**Discriminateur**	Antenne FM — 60dB 400H, 22,5kHz Dev	TP. 4 — R219 — TP. 5	98 MHz	98 MHz	T201	(Remarque 3)
4	**MPX VCO**	Borne antenne (75 ohms) 60 dB non mod.	TP. 6 — 100k	89,9 MHz	89,9 MHz	RT301	19 kHz ± 50 Hz

Remarque 1: Appliquer des signaux à faible entrée provenant d'un générateur de balayage (avec une petite quantité de bruit surimposésur une forme d'onde IF, comme indiqué sur la Fig. 25) et régler la forme d'onde jusqu'à ce qu'elle soit maximale et symétrique.

Remarque 2: Provoquer l'apparition d'une courbe S sur l'écran par T201, comme indiqué sur la Fig. 26, et la régler jusqu'à ce que les points A et B soient positionnés symétriquement et que la ligne A-B soit linéaire.

Remarque 3: Appliquer un compteur de zéro CC sur TP. 4 et TP. 5, puis régler jusqu'à ce qu'il lise 0 ± 20 mV

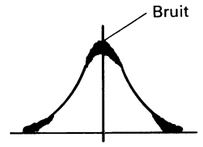


Fig. 25

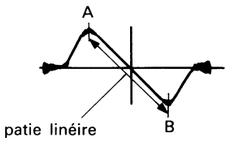


Fig. 26

REGLAGE DE TUNER AM

FONCTION: AM

MODULATION: 400Hz 30% Mod. 74dB µ /m

Order		Connexion		Montage		Réglage pour	
		Entrée	Sortie	Indicateur d'accord	Signal	Réglage	Indication
1	**Amplificateur de fréquence Intermédiaire**	TP. 7 — 100k 0.1 µ	TP. 8 — 100k 0.1 µ	—	450kHz	T202	(Remarque 4)
2	**Portée (Remarque 5)**	Antenne en cardon	TP. 9 (MW) TP. 10 (LW)	(MW) 530kHz (pour US, CS) 522kHz (sauf US, CS)	—	(MW) L152	1.3 V ± 0.1 V (pour US, CS) 1.2 V ± 0.1 V (sauf US, SC) (Remarque 6)
				(LW) 153kHz	—	(LW) L154	1.2 V ± 0,1 V (Remarque 6)
3	**Alignement**	400Hz 30% Mod.	Sortie audio	(MW) 603kHz or 600kHz	(MW) 603kHz or 600kH	L151	V max. (Remarque 7)
				(LW) 163kHz	(LW) 163kHz	L153	

Remarque 4: Régler T202 de manière à obtenir la forme d'onde illustrée par la Fig.27. Après réglage, augmenter le niveau de sortie du générateur de balayage et adjuster de manière à ce que la Fig. soit plate.

Remarque 5: Portée est réglé en usine. Procéder comme indiqué s'il a été touché par erreur.

Remarque 6: Raccorder le indicateur zero c. c. à TP. 9, TP. 10 et régler L 152, L154.

Remarque 7: D'abord, régler le niveau d'entrée sur 74 dB µ /m. Au fur et à mesure du réglage, réduire le niveau d'entrée jusqu'au niveau minimum permissible (environ 60 dB) et répéter le réglage jusqu'à ce que la sortie maximale soit obtenue à la fréquence spécifiée.

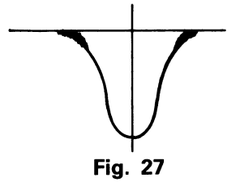


Fig. 27

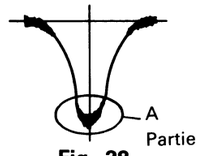


Fig. 28

Installer un condensateur d'environ 150 PF en parallèle sur C425 dans le cas où l'interférence d'enregistrement en PO et GO est trop importante.

SECTION PLATINE-CASSETTE

● Emplacements de réglage

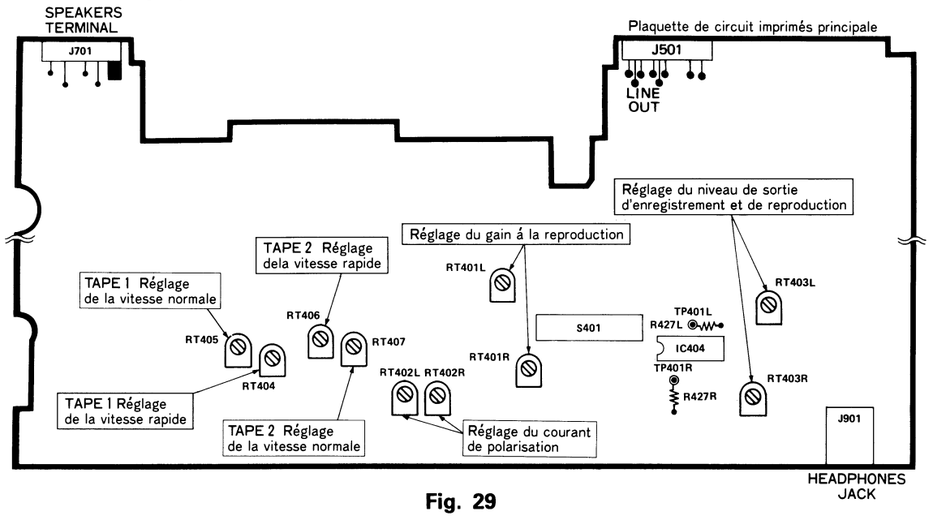


Fig. 29

● Instrument à utiliser

1. Oscillateur audio
2. Voltmètre électronique
3. Atténuateur
4. Fréquencemètre

● Calibres, et bandes d'essai et de vérification

1. Calibre de montage de tête
2. Bande d'étalonnage Dolby, 400 Hz
3. Bande d'étalonnage d'azimuth, 10 kHz
4. Bande d'étalonnage de la vitesse de la bande, 3000 Hz
5. Bande de la miroir (pour contrôle de défilement de la bande)
6. Bande Normal (MAXELL UD I 90)
   Bande Chrome (MAXELL UD II 90)
   Bande Metal (MAXELL MX46)

● Position de bouton

A moins d'indication contraire, réglar le commutateur et bouton sur la position indiquée ci-aprés.

Commutateur Dolby NR	OFF

Ouvrir le couvercle de cassette. Puis nettoyer les têtes, le galet presseur et le cabestan avec de l'alcool. Procéder ensuite au réglage suivant.

1. Réglage de la vitesse de défilement de la bande

Remarque 1: Toujours régler la vitesse de (1) puis de (2). Si le réglage est fait dans l'ordre inverse, la vitesse rapide s'en trouve affectée.

Remarque 2: Pour la commutation vitesse normale/vitesse élevée, utiliser le programme de test de micro-ordinateur.

※Programme de test micro-ordinateur

Le test de micro-ordinateur s'effectue de la façon suivante: tout en appuyant sur la touche d'arrêt (STOP) et la touche d'avance rapide (FF) de la TAPE 1, brancher le cordon d'alimentation sur une prise secteur. En mode de lecture, le passage vitesse normale/vitesse élevée se fait en actionnant la touche de lecture. Si on coupe l'alimentation, le programme de test de micro-ordinateur est annulé.

(1) Vitesse normale

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de la vitesse de la bande	3000 $^{+10}_{-0}$ Hz	RT405 (TAPE 1) RT407 (TAPE 2)

(2) Vitesse rapide

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de la vitesse de la bande	6000 $^{+20}_{-0}$ Hz	RT404 (TAPE 1) RT406 (TAPE 2)

Procédure de réglage

Brancher le fréquencemètre sur les bornes SORTIE LIGNE (LINE OUT) et faire un préchauffage pendant 20 minutes au moins. Puis, reproduire la bande d'étalonnage sur TAPE 1 et TAPE 2 et régler la vitesse de la bande en milieu de bande.

La différence de vitesse entre TAPE 1 et TAPE 2 doit être dans des limites de ±1%.

2. Réglage d'azimut de la tête d'enregistrement/reproduction

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage d'azimut	Sortie maximale	Vis de réglage d'azimut

Méthode de réglage

Le réglage s'effectue en reliant un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et en lisant la bande d'étalonnage d'azimut. S'il y a une différence au volume le plus élevé des deux canaux, le réglage doit être fait sur le canal gauche. Vérifier alors que la différence entre les canaux est inférieure à 2 dB. Si elle est supérieure, régler de nouveau. Après la fin du réglage, appliquer le verrouillage de vis.

Régler à la fois la TAPE 1 et la TAPE 2.

3. Réglage du gain à la reproduction

Bande	Valeur d'étalonnage	Composant de réglage
Bande d'étalonnage de Dolby	300 mV	RT401L, R

Brancher le voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT), lire la bande d'étalonnage de Dolby. Régler de façon à ce que la lecture du voltmètre électronique indique la valeur de réglage.

(La différence de niveau entre la TAPE1 et la TAPE2 doit être dans une plage de 2 dB.)

4. Réglage du courant de polarisation et Réglage du niveau de sortie d'enregistrement et de reproduction

Régler RT402L, R à leur position central, et enregistrer au niveau d'enregistrement indiqué sur le tableau ci-dessous de manière à régler chaque. Puis vérifier le niveau de lecture.

Ordre des réglages	Band	Niveau d'enregistrement			Niveau de lecture		Réglage proprement
		Fréquence (Hz)	Niveau	Composant de réglage	Niveau	Composant de réglage	
1	Bande normale	400/10K	300 mV −25 dB	ATT	En moins de ± 1 dB	RT402LR	(1)
2	Bande normale	400	300 mV −10 dB	ATT	En moins de ± 1 dB	RT403LR	(2)
3	Bande normale	400/10K	300 mV −25 dB	ATT	En moins de ± 1 dB	Vérification	(1)
4	Bande chrome	400/10K	300 mV −25 dB	ATT	En moins de ±3 dB	Vérification	(1)
5	Bande metal	400/10K	300 mV −25 dB	ATT	En moins de ±3 dB	Vérification	(1)

Méthode de réglage

(1) Réglage du courant de polarisation

1) Brancher un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et un oscillateur audio aux bornes AUX IN à l'aide d'un atténuateur. Passer en mode "enregistrement" et, avec le voltmètre réglé sur 300 mV, vérifier la sortie de l'oscillateur audio. Puis, vérifier l'atténuateur et le régler sur 300 mV — 25 dB. (Fréquence: 400 Hz)
2) Après avoir enregistré dans ces conditions de réglage, régler l'oscillateur audio sur 10 kHz et enregistrer de nouveau.
3) Mettre l'appareil en mode de "reproduction", faire une lecture de la sortie et vérifier que la différence de sortie entre les deux fréquences soit comprise dans une plage de ± 1 dB.
4) Si la différence de sortie n'est pas dans cette plage de ± 1 dB, faire les réglages approriés sur le RT402LR, puis, comme précédemment, recommencer le test d'enregistrement/reproduction, en veillant à ce que la sortie soit dans la plage de ± 1 dB.

Note: Si vous utilisez des bandes au chrome et metallors de la vérification, et si la plage dépasse les ± 3 dB spécifiés, refaire les réglages à l'aide d'une bande normale.

(2) Réglage du niveau de sortie d'enregistrement et de reproduction.

1) Brancher un voltmètre électronique sur les bornes SORTIE LIGNE (LINE OUT) et une oscillateur audio aux bornes AUX IN. Appliquer un signal de 400 Hz, passer en mode d'enregistrement et enregistrer tout en réglant la sortie de l'oscillateur audio de façon à ce que la voltmètre indique 300 mV — 10 dB.
2) Passer en mode de "reproduction" et vérifier que la sortie soit de — 10 dB ± 1 dB.
3) Si la différence de sortie se trouve en dehors des limites de ± 1 dB, régler RT403LR correctment. Puis répéter l'enregistrement/lecture de la même maniére jusqu'a ce que la difference de sortie se trouve dans les linites de ± 1 dB.

5. Inspection et réglage du châssis de cassette

No.	Point d'inspection	Valeur de référance	Observation
1	Couple en lecture	De 35 à 75 g·cm	Cassette de couple d'entrafnenent
2	Couple avance rapide/rebobinage	De 85 à 170 g·cm	Cassette de couple d'entrafnenent
3	Tension bobine débitriee	De 2,0 à 6,0 g·cm	Cassette de couple d'entrafnenent
4	Force de défilement de bande	Plus de 120g	

CD PLAYER SECTION

When carrying out adjustment of the PX P.W.B., remove the Key P.W.B. and, after connecting an adjutment jig to the test point (refer to DISASSEMBLY Fig. 7), place a disc in the unit and then adjust.

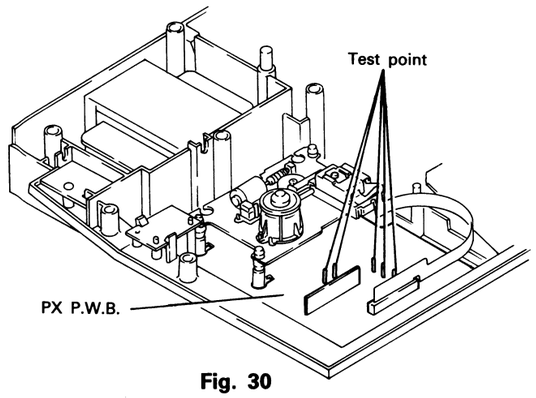


Fig. 30

Adjustment procedure

Whenever any of the operations listed below are carried out, then, without fail, make sure to perform the circuit adjustments described in section 1 — 3 below.

(1) Replacement of parts and Overhaul in the Unit Mechanism Assembly
(2) Replacement of parts in the Pickup Unit
(3) Replacement of parts in the CD power supply circuit

CD PLAYER CIRCUIT ADJUSTMENT

Note) If the adjustment is being made following the replacement of parts in the Pickup Unit, preset the Variable Resistors as shown in the table below.

● Presetting

Adjustment	Circuit Number	Preset Position
Laser Diode Output	VR901	Center
Tracking Servo Offset	VR902	Center

Adjustments should be made in the following sequence:

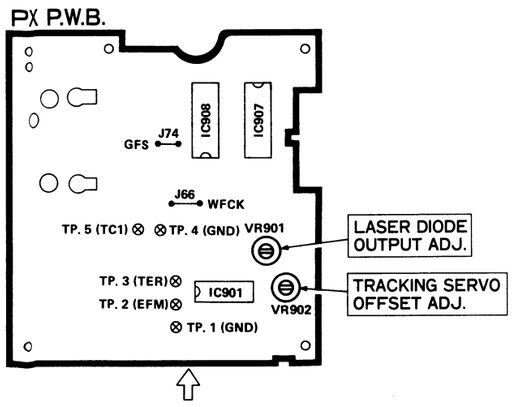


Fig. 31

Cautions on CD Operation

The MX-W50 turns OFF all power to the CD unit other than that to the function CD (IC 907, however, remains ON). You must therefore carry out the following when adjusting the PX P.W.B. Assy independently.

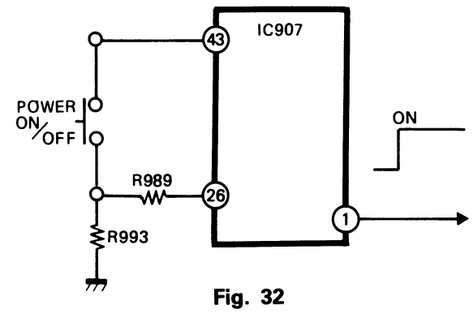


Fig. 32

Set the POWER ON/OFF switch to ON.
The CD POWER ON command is output from Pin ① of IC 907 when the power is turned ON.

1. Laser Diode Output Adjustment

Note) Do not perform this adjustment except when the Pickup Mechanism, Laser Circuit or the CD Power Circuit has undergone replacement of parts.

(1) Instrument to be used
Oscilloscope

(2) Adjusting Procedure

1) Connect the oscilloscope to TP. 2 (EFM) and TP. 1 (GND) (Fig. 33).
2) Load a disc into the player, clamper in, set the Laser, Open/Close Switch to "ON" and take a reading of the EFM signal with the oscilloscope.

Note) When the Laser,Open/Close switch is "ON" never peek into the lens. This is very dangerous.

How to Read the EFM Signal Wave Form and Procedure for Connecting the Oscilloscope

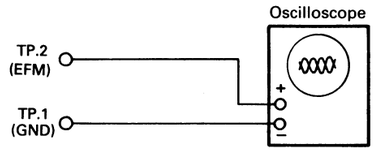


Fig. 33

3) Adjust the VR901 so that the amplitude of the EFM signal in the oscilloscope reaches a level of 1.3 V ± 40 mV.

Note) However, if the signal level is within the range of 1.1 — 1.5 V, it is normal and no adjustment is necessary.

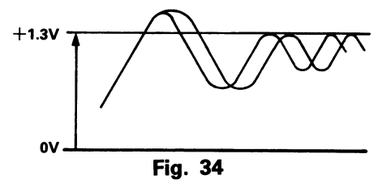


Fig. 34

2. Tracking Servo Offset Adjustment

(1) Instrument to be used
DC Voltmeter

(2) Adjustment Procedure

1) Steps 1 is post adjustment procedures.
2) While in the "Stop" mode, connect the DC voltmeter to TP. 3 (TER) and TP.1 (GND). (Fig. 35).
3) Adjust VR902 so that the DC voltmeter indicates + 20 mV ± 2 mV.

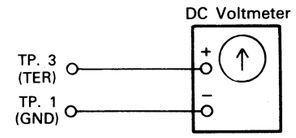


Fig. 35

3. Error rate check

Put the error rate measurement disc into the PLAY mode, connect the frequency counter to TP. 5 (TC 1) and TP. 1 (GND), and measure the error rate.
Measurement scale is Hz/sec.

Note) Carry out error rate check after confirming that the counter value is 7.35 kHz when the unit is in the STOP mode.

4. Inspecting the Actuator (Fig. 41a)

Check the resistance of the Actuator Coils. If the values are as follows the condition is normal:
Focus Coil ..... 30 Ω (Ohms)
Tracking Coil ..... 10 Ω (Ohms)
If any coil is open or short circuited, the actuator may be defective. Check that the lens moves with a 1.5V dry cell.

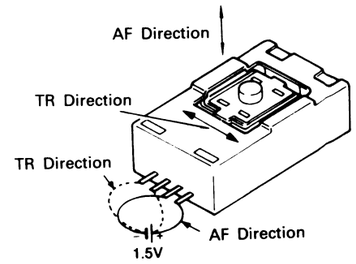


Fig. 36

SECTION LECTEUR CD

Lors des réglages de la plaquette de circuits imprimés PX, enlever la plaquette de circuits imprimés de clés et, après avoir branché un calibre de réglage sur le point test (se référer à Démontage Fig. 7), placer un disque dans l'unité et effectuer les réglages ensuite.

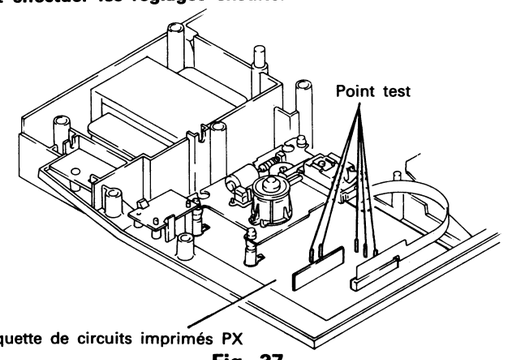


Fig. 37

Méthode de réglage

Lorsqu'une quelconque des opérations ci-dessous est effectuée, veiller à faire les réglages de circuit décrits aux sections 1-3 ci-dessous.

(1) Remplacement et démontage des pièces de l'ensemble du mécanisme de l'unité.
(2) Remplacement des pièces dans l'unité de tête de lecture.
(3) Remplacement des pièces dans le circuit d'alimentation CD.

Réglage du circuit du lecteur CD

Note: Si le réglage est fait après le remplacement des pièces de l'unité de tête de lecture, prérégler la résistance variable comme indiqué sur la table ci-dessous.

● Préréglage

Réglage	Numéro du circuit	Position de préréglage
Sortie de diode laser	VR901	Centre
Décentrage de servo de lecture de piste	VR902	Centre

Les réglages doivent être effecturés dans l'ordre suivant.

Plaquette de circuit imprimés PX

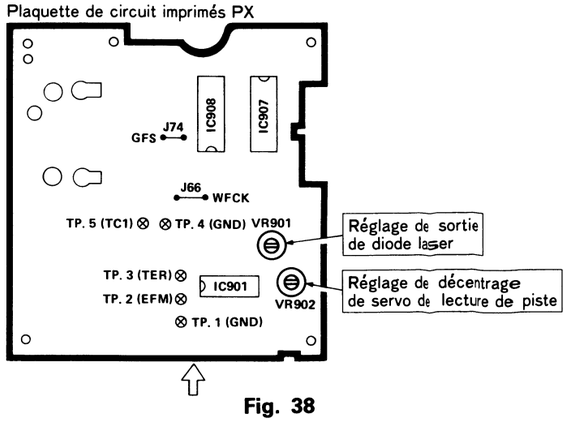


Fig. 38

Précautions pour le fonctionnement CD

Mettre hors tention l'unité CD du MX-W50, sauf pour la fonction CD (néanmoins, le IC 907 reste sous tension). Il vous faut donc effectuer les opérations suivantes lorsque vous réglez séparément la plaquette de circuits imprimés PX.

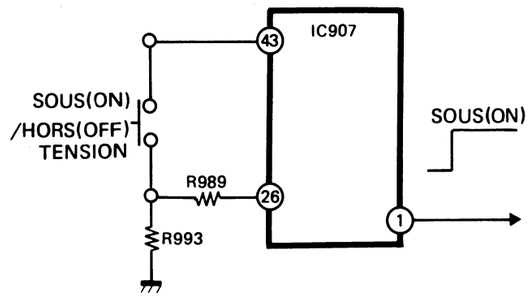


Fig. 39

Placer l'interrupteur de mise sous(ON)/hors(OFF) tension sur sous(ON).
La commande de mise sous(ON) tension CD provient de la broche ① de IC 907 lors de la mise sous(ON) tension.

1. Réglage de sortie de diode laser

Remarque: De pas faire ce réglage sauf lorsque les pièces du mécanisme de tête de lecture, du circuit laser ou du circuit d'alimentation CD ont été remplacées.

(1) Instrument à utiliser
Oscilloscope
(2) Procédure de réglage

1) Brancher l'oscilloscope sur TP. 2 (EFM) et TP. 1 (GND) (Fig. 40).
2) Mettre un disque dans le lecteur, bride de fixation, mettre le commutateur laser,ouvrir/fermer sur "sous(ON)" et faire une lecture d'un signal EFM à l'aide de l'osilloscope.

Remarque: Lorsque le commutateur laser,ouvrir/fermer est sur "sous(ON)", ne jamais regarder dans la lentille, C'est très dangereux.

Comment lire la forme d'onde du signal EFM et comment brancher l'oscilloscope

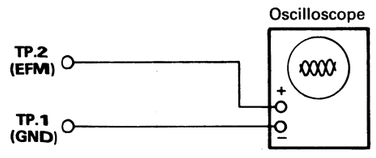


Fig. 40

3) Régler VR901 de façon à ce que l'amplitude du signal EFM de l'oscilloscope atteigne un niveau de 1, 3 V ± 40 mV.

Remarque: Néanmoins, si le niveau de signal est dans la plage de 1, 1 V — 1, 5 V, c'est normal et aucun autre réglage ne s'impose.

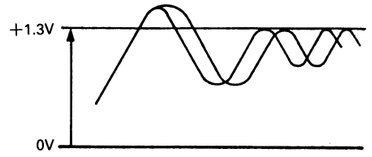


Fig. 41

2. Réglage du décalage du servo de lecture de piste

(1) Instrument à utiliser
Voltmètre CC
(2) Procédure de réglage

1) La étape de réglage 1 s'effectue après le réglage.
2) Tout en étant en mode "arrêt", brancher le voltmètre CC sur TP. 3 (TER) et TP. 1 (GND). (Fig. 42).
3) Régler VR902 de façon à ce que le voltmètre CC indique + 20 mV ± 2 mV.

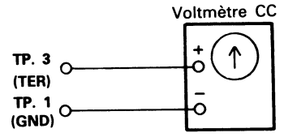


Fig. 42

3. Vérification du taux d'erreur

Mettre le disque de mesure de taux d'erreur sur le mode de lecture (PLAY), brancher le fréquencemètre sur TP. 5 (TC 1) et le TP. 1 (GND) et mesurer le taux d'erreur. L'échelle de mesure est en Hz/sec.

Remarque: Effectuer la vérification du taux d'erreur après avoir confirmé que la valeur du compteur est de 7,53 kHz lorsque l'appareil est en mode d'arrêt (STOP).

4. Vérification de l'actionneur (Fig. 41b)

Vérifier le niveau de résistance des bobines de l'actionneur. Si les valeurs sont comme indiqué ci-dessous, le fonctionnement est correct.
Bobine de focalisation ····· 30 (ohms)
Bobine de lecture de piste ····· 10 (ohms)
Si une bobine quelconque est, il se peut que l'actionneur soit défecteux. Vérifier que la lentille se déplace avec une pile sèche de 1, 5 V.

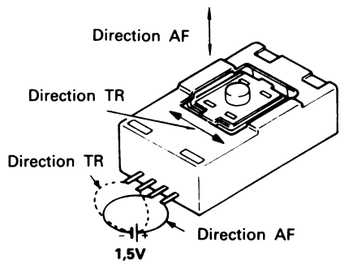


Fig. 43

LUBRICATION

Apply one or two drops of pan motor oil or sonic slider oil to rotating parts. Coat sliding parts with Molycoat (EL-10M). Lubricate once a year or every 1000 hours of operation. Do not let oil contact belts or idlers.

Rotating parts	Metal to metal	Pan motor oil (10W-40)
	Plastics to metal	Sonic slider oil (#1600)
Sliding parts	Plastics to plastics Plastics to metal	Molycoat (EL-10M)
Spring vibration prevention		Floyl (GB-TS-1)

MAINTENANCE

■ **Clean cabinet and panels when dirty**
Clean off dirt on the surfaces with a dry cloth. Never use thinners, benzene or alcohol since these will damage the surface finish.

LUBRIFICATION

Appliquer une ou deux gouttes d'huile moteur ou d'huile Sonic pour curseur, sur les membres rotatifs. De la graisse Molycoat (EL-10M) est appliquee sur les membres coulissants.
Lubrifier une fois par an ou toutes les 1000 heures de fonctionnement.
Veiller à ne pas appliquer d'huile sur les courroies ou les galets.

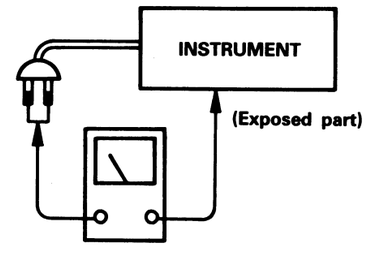
Membres rotatifs	Entre les parties métalliques	Huile moteur (10W-40)
	Entre le moulage et les parties métalliques	Huile Sonic pour curseur (#1600)
Membres coulissants	Entre moulures et moulures Entre moulures et pièces métalliques	Molycoat (EL-10M)
Prévention de vibration de ressort		Floyl (GB-TS-1)

ENTRETIEN

■ **Nettoyage du coffret et des panneaux lorsqu'ils sont sales**
Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants, de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

- **Checking method**
  Power switch is set to ON.
  Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



Insulation tester (DC 500V)

EXPLANATION OF NEW CIRCUITS

CD Voltage Detection Safety Circuit

1. To protect the circuit, the CD voltage detection circuit operates to turn the CD power off whenever the CD voltage is abnormal. If the CD Function is not supplying power to the DC there is a possibility that this safety circuit is operating. Check the voltage at each point with Q872 (2SC1740LN(S)) removed.
   This safety circuit operates under either of the following two conditions:
   (1) Whenever Q853 (2SD1913 (Q/R)) emitter voltage (+5V) has gone to +4V −0V.
   (2) Whenever Q856 (2SB1274 (Q/R)) emitter voltage (−5V) has gone to −2.5V −0V.

2. **Operation of the CD Voltage Detection Safety Circuit**

   (1) Voltage normal:
   Q872 is at cut-off, the POWER ON signal (H) is output from Pin 1 of IC907 (CD system microcomputer) and the CD power is on.

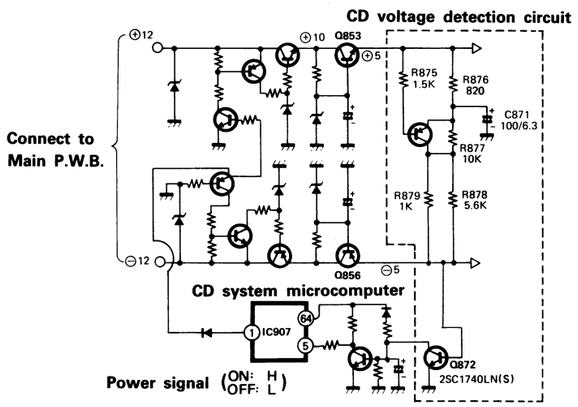
   (2) Voltage abnormal:
   Under the conditions specified in 1-(1), (2), Q872 is bypassed and Q872 goes on.

   ⇩

   Pin 5 of IC907 goes H and the CD enters the reset mode.

   ⇩

   Pin 1 of IC907 outputs a POWER OFF signal (L) and the CD goes off.



EXPLICATION DES NOUVEAUX CIRCUITS

Circuit de sécurité de détection de tension lecteur CD

1. Pour protéger le circuit, le circuit de sécurité de détection de tension lecteur CD coupe l'alimentation CD chaque fois que la tension lecteur CD est anormale. Si la fonction CD n'alimente pas le lecteur CD, il est possible que ce circuit de sécurité soit activé. Vérifier la tension en chaque point après avoir retiré le Q872 (2SC1740LN(S)). Ce circuit de sécurité fonctionne dans l'une des deux conditions suivantes:
   (1) Lorsque la tension de Q853 (2SD1913(Q/R)) l'émetteur (+5V) est comprise entre +4V −0V.
   (2) Lorsque la tension de Q856 (2SB1274 (Q/R)) l'émetteur (−5V) est comprise entre −2.5V −0V.

2. **Fonctionnement du circuit de sécurité de détection de tension lecteur CD**

   (1) Tension normale:
   Q872 est hors circuit, un signal SOUS TENSION (H) est transmis par la broche 1 de IC907 (micro ordinateur du système CD) et le lecteur CD est mis sous tension.

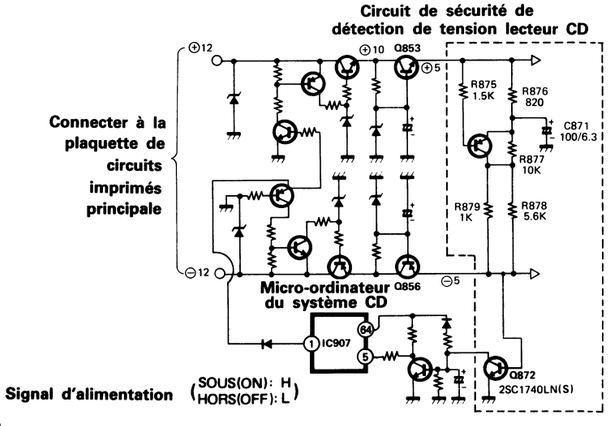
   (2) Tension anormale:
   Dans les conditions spécifiées en 1-(1), (2), Q872 est découplés et Q872 se met en circuit.

   ⇩

   La broche 5 de IC907 devient H et le lecteur CD se met en mode de remise à l'état initial.

   ⇩

   La broche 1 de IC907 transmet un signal HORS TENSION (L) et le lecteur CD se met hors tension.



EXPLANATION OF NEW PARTS OF CD UNIT

1. The parts indicated in the following table are used in compact disc players already on the market. Refer to the service manuals of the respective models.

Circuit No.	Part No.	Function Name	Service Manual No.
IC901	BA6352S	Pre-amp IC	DA-6000 (TY No. 517)
IC905	HD49201A	Signal processing	DA-6000 (TY No. 517) ※Same as IC201 (MSM6284)
IC851	HA12096	DA converter	DA-6000 (TY No. 517)
IC908	HD61404SF54	Mechanism control microcomputer	DA-006 (TY No. 556)
IC903	TM5060C	Servo IC	MX-W30 (TY No. 552)
IC907	μPD7516HCW-317	CD system microcomputer	DA-58 (TY No. 573)

2. Refer to DA-6000 service manual (TY No. 517) for the interface/signal timing.

EXPLICATION DES NOUVELLES PIECES DU LECTEUR CD

1. Les piéces indiquées au tableau ci-dessous sont utilisées sur les lecteurs de disques compacts déjà sur le marché. Voir le manuel d'entretien du lecteur concerné.

N° de circuit	N° de pièce	Désignation de la fonction	N° du manuel d'entretien
IC901	BA6352S	IC pré-ampli	DA-6000 (TY No. 517)
IC905	HD49201A	Traitement des signaux	DA-6000 (TY No. 517) ※Identique à IC201 (MSM 6284)
IC851	HA12096	Convertisseur NA	DA-6000 (TY No. 517)
IC908	HD61404SF54	Micro-ordinateur de commande du mécanisme	DA-006 (TY No. 556)
IC903	TM5060C	IC servo	MX-W30 (TY No. 552)
IC907	μPD7516HCW-317	Micro-ordinateur du système CD	DA-58 (TY No. 573)

2. Voir le manuel d'entretien du DA-6000 (TY N° 517) pour la synchronisation signal/interface.

DIFFERENCE FOR DESTINATION (for MAIN P.W.B.)
DIFFÉRENCE EN FONCTION DV PAYS DE DESTINATION (pour la plaquette principal)

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
C102—C106	—	—	—	—	USE	—	—	—
C153	USE	USE	USE	—	—	—	—	—
C155	USE	USE	USE	—	—	—	—	—
C157, 158	USE	USE	USE	—	—	—	—	—
C160, 161	USE	USE	USE	—	—	—	—	—
C222	—	USE	—	—	USE	—	—	—
C319, 320	USE	USE	USE	—	—	—	—	—
C322LR	—	USE	—	—	—	—	—	—
C325	USE	USE	USE	—	—	—	—	—
C514—517	—	—	—	—	USE	—	—	—
C518LR	—	—	—	—	USE	—	—	—
C712LR	—	—	USE	—	—	—	—	—
C723LR, 724	—	—	—	—	USE	—	—	—
C755LR	—	—	—	—	USE	—	—	—
C833—842	—	—	—	—	USE	—	—	—
R001	—	—	—	—	—	—	USE	—
R103—108	—	—	—	—	USE	—	—	—
R110	USE	USE	USE	USE	—	USE	USE	USE
R153—156	USE	USE	USE	—	—	—	—	—
R233	—	USE	—	—	USE	—	—	—
R310, 311	USE	USE	USE	—	—	—	—	—
R318, 319	USE	USE	USE	—	—	—	—	—
R320, 321	USE	USE	USE	—	—	—	—	—
R323, 324	USE	USE	USE	—	—	—	—	—
R326LR	—	USE	—	—	—	—	—	—
Q101, 102	—	—	—	—	USE	—	—	—
Q151, 152	USE	USE	USE	—	—	—	—	—
Q302, 303	USE	USE	USE	—	—	—	—	—
Q307, 308	USE	USE	USE	—	—	—	—	—
D103, 104	—	—	—	—	USE	—	—	—
D105, 106	USE	USE	USE	—	—	—	—	—
D154—157	USE	USE	USE	—	—	—	—	—
D365	—	—	—	—	—	—	USE	—
D366	USE	USE	USE	USE	USE	USE	—	—
D367	USE	USE	USE	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153, 154	USE	USE	USE	—	—	—	—	—
CP101, 201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
US pin cord	—	—	—	—	USE	—	—	—
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ⑦	—	—	—	USE	USE	USE	USE	USE
Jumper ③, ④, ⑤	—	—	—	—	USE	—	—	—
Jumper ②	USE	USE	USE	—	—	—	—	—
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬, ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—
Jumper ⑲	USE	USE	USE	—	—	—	—	—
Jumper ㉑	USE	USE	USE	—	—	—	—	—
Jumper ㉘	USE	USE	USE	—	—	—	—	—
Jumper ㉚	USE	—	USE	USE	—	USE	USE	USE
Jumper ㊱, ㊲	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㊴, ㊵	USE	USE	—	USE	USE	USE	USE	USE

(for CIRCUIT DIAGRAM) (pour le schéma des circuits)

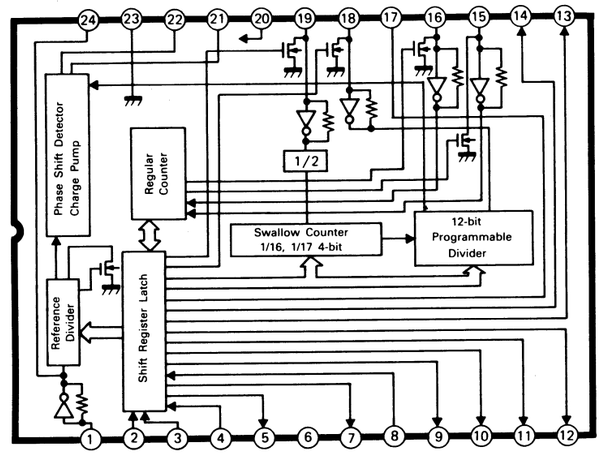
☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
C102	—	—	—	—	0.022 μ F	—	—	—
C103	—	—	—	—	0.22 μ F/50V	—	—	—
C104	—	—	—	—	0.22 μ F/50V	—	—	—
C105	—	—	—	—	39PF	—	—	—
C106	—	—	—	—	39PF	—	—	—
C152	5.6PF(CH)	5.6PF(CH)	5.6PF(CH)	8.2PF(CH)	8.2PF(CH)	8.2PF(CH)	3.9PF(CH)	3.9PF(CH)
C153	33PF(CH)	33PF(CH)	33PF(CH)	—	—	—	—	—
C155	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
C157	270PF	270PF	270PF	—	—	—	—	—
C158	120PF(CH)	120PF(CH)	120PF(CH)	—	—	—	—	—
C159	18PF(CH)	18PF(CH)	18PF(CH)	22PF(CH)	22PF(CH)	22PF(CH)	18PF(CH)	18PF(CH)
C160	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
C161	0.022 μ F	0.022 μ F	0.022 μ F	—	—	—	—	—
C222	—	10 μ F/16V	—	—	10 μ F/16V	—	—	—
C309LR	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.012 μ F	0.018 μ F	0012 μ F
C319	1 μ F/50V	1 μ F/50V	1 μ F/50V	—	—	—	—	—
C320	0.22 μ F/50V	0.22 μ F/50V	0.22 μ F/50V	—	—	—	—	—
C321	0.022 μ F	0.022 μ F	0.022 μ F	0.022 μ F	0.033 μ F	0.022 μ F	0.022 μ F	0.022 μ F
C322LR	—	3.3 μ F/50V	—	—	—	—	—	—
C325	1000P	1000P	1000P	—	—	—	—	—
C501LR	150PF	150PF	150PF	150PF	2200PF	150PF	150PF	150PF
C503LR	100FP	100PF	100FP	100PF	470PF	100FP	100PF	100PF
C514	—	—	—	—	1000PF	—	—	—
C515	—	—	—	—	1000PF	—	—	—
C516	—	—	—	—	220PF	—	—	—
C517	—	—	—	—	220PF	—	—	—
C518LR	—	—	—	—	680PF	—	—	—
C711LR	0.047 μ F	0.047 μ F	0.1 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F	0.047 μ F
C712LR	—	—	0.1 μ F	—	—	—	—	—
C723LR	—	—	—	—	0.01 μ F	—	—	—
C724	—	—	—	—	0.01 μ F	—	—	—
C755LR	—	—	—	—	1000PF	—	—	—
C833	—	—	—	—	0.022 μ F	—	—	—
C834	—	—	—	—	0.022 μ F	—	—	—
C835, 836	—	—	—	—	0.01 μ F	—	—	—
C837, 838 839, 840	—	—	—	—	0.022 μ F	—	—	—
C841	—	—	—	—	0.022 μ F	—	—	—
C842	—	—	—	—	0.022 μ F	—	—	—
R001	—	—	—	—	—	—	2.7MΩ	—
R103	—	—	—	—	100KΩ	—	—	—
R104	—	—	—	—	100Ω	—	—	—
R105	—	—	—	—	100KΩ	—	—	—
R106	—	—	—	—	10KΩ	—	—	—
R107	—	—	—	—	1.2KΩ	—	—	—
R108	—	—	—	—	100KΩ	—	—	—
R110	220Ω	220Ω	220Ω	220Ω	—	220Ω	220Ω	220Ω
R153	220KΩ	220KΩ	220KΩ	—	—	—	—	—
R154	2.2KΩ	2.2KΩ	2.2KΩ	—	—	—	—	—
R155	4.7KΩ	4.7KΩ	4.7KΩ	—	—	—	—	—
R156	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R157	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/6W)	1KΩ(1/2W)	1KΩ(1/6W)
R214	10KΩ	10KΩ	10KΩ	10KΩ	10KΩ	10KΩ	22KΩ	10KΩ
R219	33KΩ	33KΩ	33KΩ	33KΩ	33KΩ	33KΩ	15KΩ	33KΩ

☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
R233	—	47KΩ	—	—	47KΩ	—	—	—
R235	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.2KΩ	1.5KΩ	1.2KΩ
R310	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R311	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R318	1KΩ	1KΩ	1KΩ	—	—	—	—	—
R319	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R320	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R321	6.8KΩ	6.8KΩ	6.8KΩ	—	—	—	—	—
R323	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R324	10KΩ	10KΩ	10KΩ	—	—	—	—	—
R326LR	—	3.3KΩ	—	—	—	—	—	—
R328LR	1.5KΩ	560Ω	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ	1.5KΩ
Q101	—	—	—	—	2SC1740	—	—	—
Q102	—	—	—	—	2SK104F	—	—	—
Q151	DTC124ES-T	DTC124ES-T	DTC124ES-T	—	—	—	—	—
Q152	DTC124ES-T	DTC124ES-T	DTC124ES-T	—	—	—	—	—
Q302	2SA933S	2SA933S	2SA933S	—	—	—	—	—
Q303	2SA933S	2SA933S	2SA933S	—	—	—	—	—
Q307	2SC1740	2SC1740	2SC1740	—	—	—	—	—
Q308	2SC1740	2SC1740	2SC1740	—	—	—	—	—
D103	—	—	—	—	1K60R	—	—	—
D104	—	—	—	—	1K60R	—	—	—
D105	1SS254	1SS254	1SS254	—	—	—	—	—
D106	1SS254	1SS254	1SS254	—	—	—	—	—
D154	KV1260	KV1260	KV1260	—	—	—	—	—
D155	1SS254	1SS254	1SS254	—	—	—	—	—
D156	1SS254	1SS254	1SS254	—	—	—	—	—
D157	1SS254	1SS254	1SS254	—	—	—	—	—
D365	—	—	—	—	—	—	1SS254	—
D366	1SS254	1SS254	1SS254	1SS254	1SS254	1SS254	—	—
D367	1SS254	1SS254	1SS254	—	—	—	—	—
L101	USE	USE	USE	USE	—	USE	USE	USE
L153	USE	USE	USE	—	—	—	—	—
L154	USE	USE	USE	—	—	—	—	—
CP101	—	USE	—	—	USE	—	—	—
CP201	—	USE	—	—	USE	—	—	—
CP301LR	—	USE	—	—	—	—	—	—
MF203	—	—	—	—	USE	—	—	—
S501	—	—	—	—	—	—	—	USE
F802	T2A	T2A	T2A	T2A	T2A	T2A	2A—125V	T2A
F803	T2A	T2A	T2A	T2A	T2A	T2A	2A—125V	T2A
Jumper ①	USE	—	USE	USE	—	USE	USE	USE
Jumper ②	USE	USE	USE	—	—	—	—	—
Jumper ③	—	—	—	—	USE	—	—	—
Jumper ④	—	—	—	—	USE	—	—	—
Jumper ⑤	—	—	—	—	USE	—	—	—
Jumper ⑦	—	—	—	USE	USE	USE	USE	USE
Jumper ⑩	USE	USE	USE	USE	—	USE	USE	USE
Jumper ⑬	—	—	—	USE	USE	USE	USE	USE
Jumper ⑭	—	—	—	USE	USE	USE	USE	USE
Jumper ⑯	USE	USE	USE	—	—	—	—	—

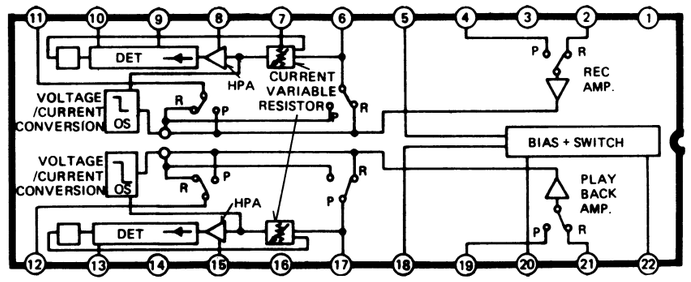
☆No.	ES	VS	BK	KS	ZS	SA	US, CS	EW
Jumper ⑲	USE	USE	USE	—	—	—	—	—
Jumper ㉑	USE	USE	USE	—	—	—	—	—
Jumper ㉘	USE	USE	USE	—	—	—	—	—
Jumper ㉚	USE	—	USE	USE	—	USE	USE	USE
Jumper ㊵	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㊶	USE	—	USE	USE	USE	USE	USE	USE
Jumper ㊿	USE	USE	—	USE	USE	USE	USE	USE
Jumper ㊶	USE	USE	—	USE	USE	USE	USE	USE

IC INTERNAL BLOCK DIAGRAM·SCHÉMA FONCTIONNEL INTÉRIEUR IC

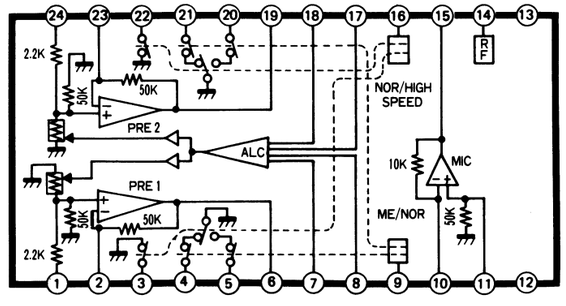
IC302 LC7217
PLL SYNTH.
(MAIN P.W.B.
TUNER SECTION)



IC404 HA12086
DOLBY NR
(MAIN P.W.B.
DECK SECTION)



IC405 LA3240
REC AMP.
(MAIN P.W.B.
DECK SECTION)



VOLTAGE CHART·TABLEAU DES TENSION

MD101

Pin No	Voltage
1, 2	0
3	11.4
4, 5	0
6	1.8~7.6
7	0
10	0

IC201

Pin No	Voltage
1, 2	2.0
3	2.2
4	2.3
5	3.9
6	2.3
7	0

IC202

Pin No	Voltage
1~3	2.6
4	0
5	8.8
6	8.7
7	8.5
8	4.6
9	3.7
10	2.5
11	5.8
12	3.4
13	0
14	1.3
15	1.6
16,17	0
18	2.6
19	1.6
20	0
21,22	4.1
23,24	0

IC301

Pin No	Voltage
1	7.8
2	1.62
3	1.7
4	2.85
5	3.0
6	11.0
7	0
8	0.3
9	4.1
10, 11	1.65
12	1.48
13~15	1.65
16	0.24

IC302

Pin No	Voltage
1	2.44
2~4	0
7, 8	0
9	0.33
13,14	11.4
17	0.56
18	0
19	2.7
20	5.2
21	1.0
22	⟨1.0⟩
23	0
24	2.63

IC351

Pin No	Voltage
33	5.3

IC352

Pin No	Voltage
16	5.2

IC401

Pin No	Voltage
4, 5	4.0
8	3.8
9	(6.8) ⟨0⟩
10	0
11	9.1
16,17	4.0

FM: MW:( ) LW: 〈 〉

IC402

Pin No	Voltage
7, 8	12.2

IC403

Pin No	Voltage
4	−12.0
8	12.3

IC404

Pin No	Voltage
1	0
2	6.1
3	1.0
4	6.1
5	1.3 ※6.1
6, 7	6
8	6.1
11	6.2
12	0.2
15	6.1
16,17	6.0
18	(0.6) ⟨8.8⟩
19	6.0
21	6.0
22	12.3

※ NR ON

IC405

Pin No	Voltage
6	5.9
19	5.9

IC501

Pin No	Voltage
1~3	0
4	−11.7
5~7	0
8	12.0

IC551

Pin No	Voltage
7	12.0
8	12.0

IC651

Pin No	Voltage
1~3	0
4	−5.3
5~7	0
8	6.0

IC701

Pin No	Voltage
1	−14.2
2	−14.3
3	0
4	−40.0
5	1.3
6	17.6
7	−42.3
8	−43
9	−43.7
10	0
11	43.0
12	41.2
13	0
14	−43.6
15	−1.3
16	0
17	−12.3
18	−12.2

IC702

Pin No	Voltage
1	3.4
2	2.0
3	0.76
4	0
5	2.4
6~8	0

IC751

Pin No	Voltage
4	−11.8
8	12.0

Q401

	Voltage	
	PLAY	REC
E	0	0
C	0	10.7
B	4.8	0

Circuit No.	Voltage E	C	B
Q151	3.8	3.8	(3.7) ⟨11.4⟩
Q151	0	0	(0) ⟨11.4⟩
Q202	8.5 (9.2)	0 (9.1)	11.3 (8.5)
Q203	0	0	11.5 (0)
Q204	0	0	0.75
Q205	0	5.2	C
Q206	1.58	3.7	2.2
Q301	11.6	11.5	10.8
Q302	(12.1)	(12.1)	(11.4)
Q303	⟨12.0⟩	⟨12.0⟩	⟨11.2⟩
Q304	5.3	0 (5.3) ⟨5.3⟩	5.3
Q305	0.61	1.8~7.6 (1.2~8.5)	1.0
Q306	0	1.8~7.6 (1.2~8.5)	0.61
Q307	0	⟨1.2~4.8⟩	⟨0.62⟩
Q308	⟨0.62⟩	⟨1.2~4.8⟩	⟨1.0⟩
Q309L, R	1.1	5.7	1.67

FM: MW:( ) LW: 〈 〉

Circuit No.	Voltage E	C	B
Q402	0	6.8	0
Q403	0	0	6.2
Q404	0	0	11.7
Q405	0	0	4.3
Q406L, R	0	0	0.7
Q407L, R	0	0	4.4
Q408	0	0 ⟨8.8⟩	4.6
Q409L, R	0	0	−2.8
Q410	−12.0	−0.68	−12.0
Q411L, R	0	0	0
Q412	0 ⟨16.0⟩	0.4 ⟨5.8⟩	0.4 ⟨0.2⟩
Q413	0 ⟨16.0⟩	0.34 ⟨5.7⟩	0.34 ⟨0.56⟩
Q414	0.32 ⟨5.7⟩	12.3	0 ⟨6.4⟩
Q415	0	0	12.3
Q416	0	0	0.73
Q417	0	0 ⟨6.3⟩	4.3 ⟨0⟩
Q418L, R	0	0	4.4
Q419	0	0	4.6
Q420	0	0	0.65
Q421	0	22.6	0
Q422	0	22.3	0
Q423	0	11.8	0
Q424	12.3	12.3	11.7
Q425	0	0	6.2
Q426	0	5.1	0.5
Q427	0	5.1	0.3
Q428	0	22.0	0
Q429	0	11.7	0
Q430	0	22.0	0

FM: MW:( ) LW: 〈 〉
DOLBY NR: ☐

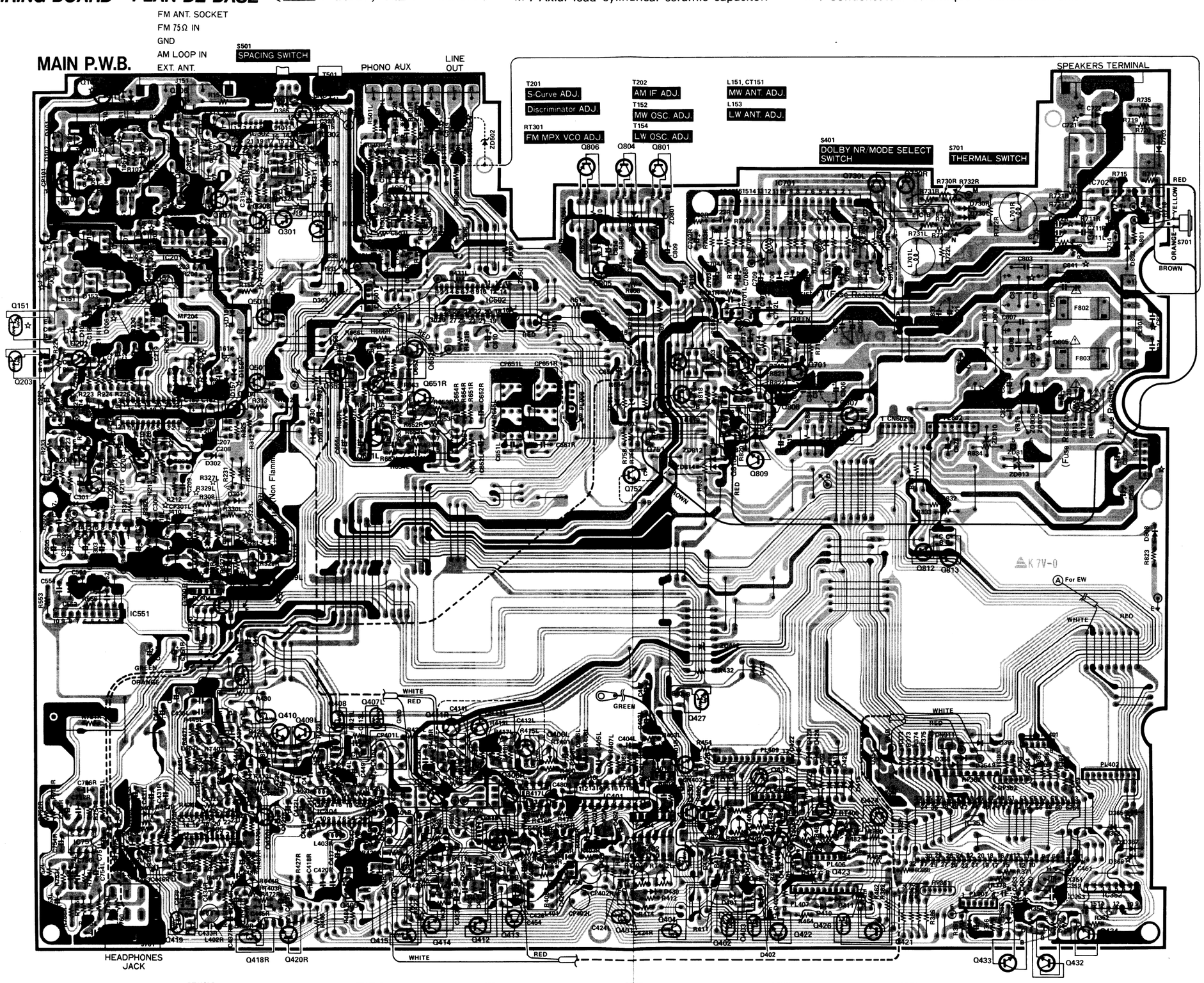
Circuit No.	Voltage E	C	B
Q431	12.3	12.3	11.7
Q432	0	5.0	0
Q433	0	0	0.7
Q434	0	0	0.6

Circuit No.	Voltage E	C	B
Q501L, R	0	0	0.63
Q651L, R	0	0	−4.8
Q652L, R	0	0	0.7
Q654	5.2	3.3	4.5
Q701	6.9	6.9	6.3
Q730L, R	0	0	0
Q751	2.0	2.0	1.5
Q801	12.2	19.0	12.8
Q802	12.2	12.1	11.4
Q803	0	12.0	0.7
Q804	6.0	18.5	6.6
Q805	0	12.8	0
Q806	−11.8	−19.5	−12.5
Q807	12.3	18.7	12.8
Q808	0	6.9	0.3
Q809	0	0	0.65
Q810	0	0.65	0
Q811	12.1	12.0	11.3
Q812	0		0.78
Q813	0	0	

Refer to pp. 25-26 for the Main P.W.B. voltage.
Se référer aux pp. 25-26 pour la tension de la plaque de circuits imprimés principale.

PRINTED WIRING BOARD · PLAN DE BASE [: Earth , : Others]

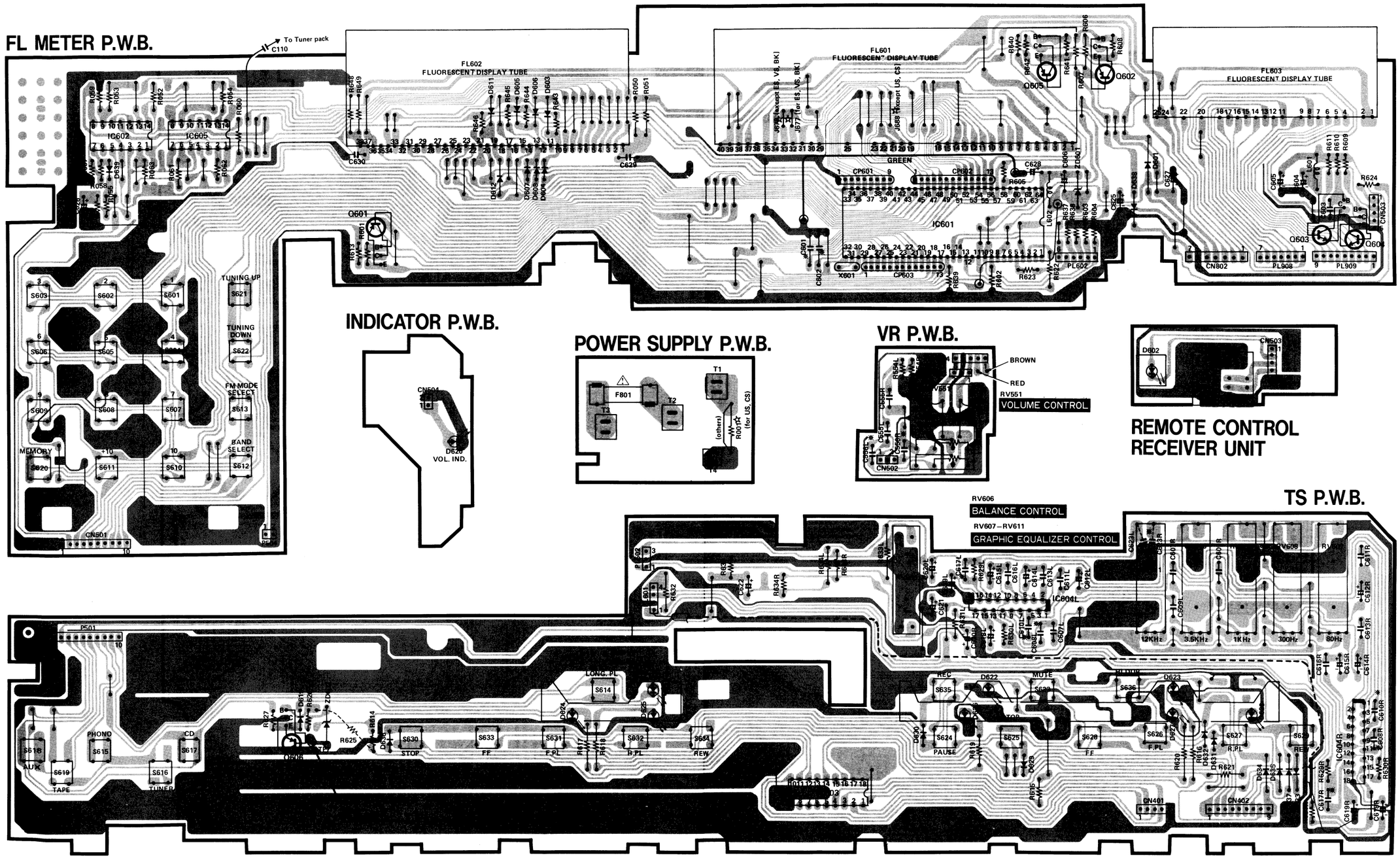
The circuit symbol (☆) means difference for destination. (Refer to the table in page 23.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 23.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



PRINTED WIRING BOARD
PLAN DE BASE

〔 : Earth , : Others 〕

The circuit symbol (☆) means difference for destination. (Refer to the table in page 23.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 23.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



IC601

Pin No	Voltage
57	−27
58	−0.7
64	5.2

IC603

Pin No	Voltage
17	5.1
18	5.1

IC602, IC605

Pin No	Voltage
4	5.2
11	−26.5

IC601 ~ FL603

Pin No	Voltage
1, 2	−21
24,25	−21

IC604L, R

Pin No	Voltage	Pin No.	Voltage
1	4.2	11	5.3
2,3	5.3	12~14	4.6
4,5	4.2	15,16	5.2
6,7	5.3	17	8.7
8,9	4.2	18	0
10	4.6		

Circuit No.	Voltage		
	E	C	B
Q601	5.2	5.2	4.5
Q602	5.3	−25.8	5.2
Q603	0	5.2	0
Q604	0	0	0.66
Q605	5.2	5.3	4.5

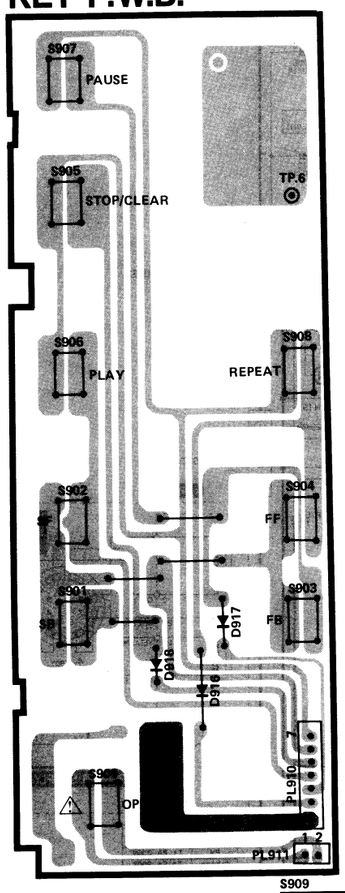
PRINTED WIRING BOARD
PLAN DE BASE

〔 ■ : Earth , ▒ : Others 〕

※ : Axial lead cylindrical ceramic capacitor.

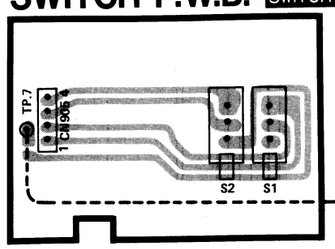
※ : Condensateur ceramique a conducteur axial.

KEY P.W.B.

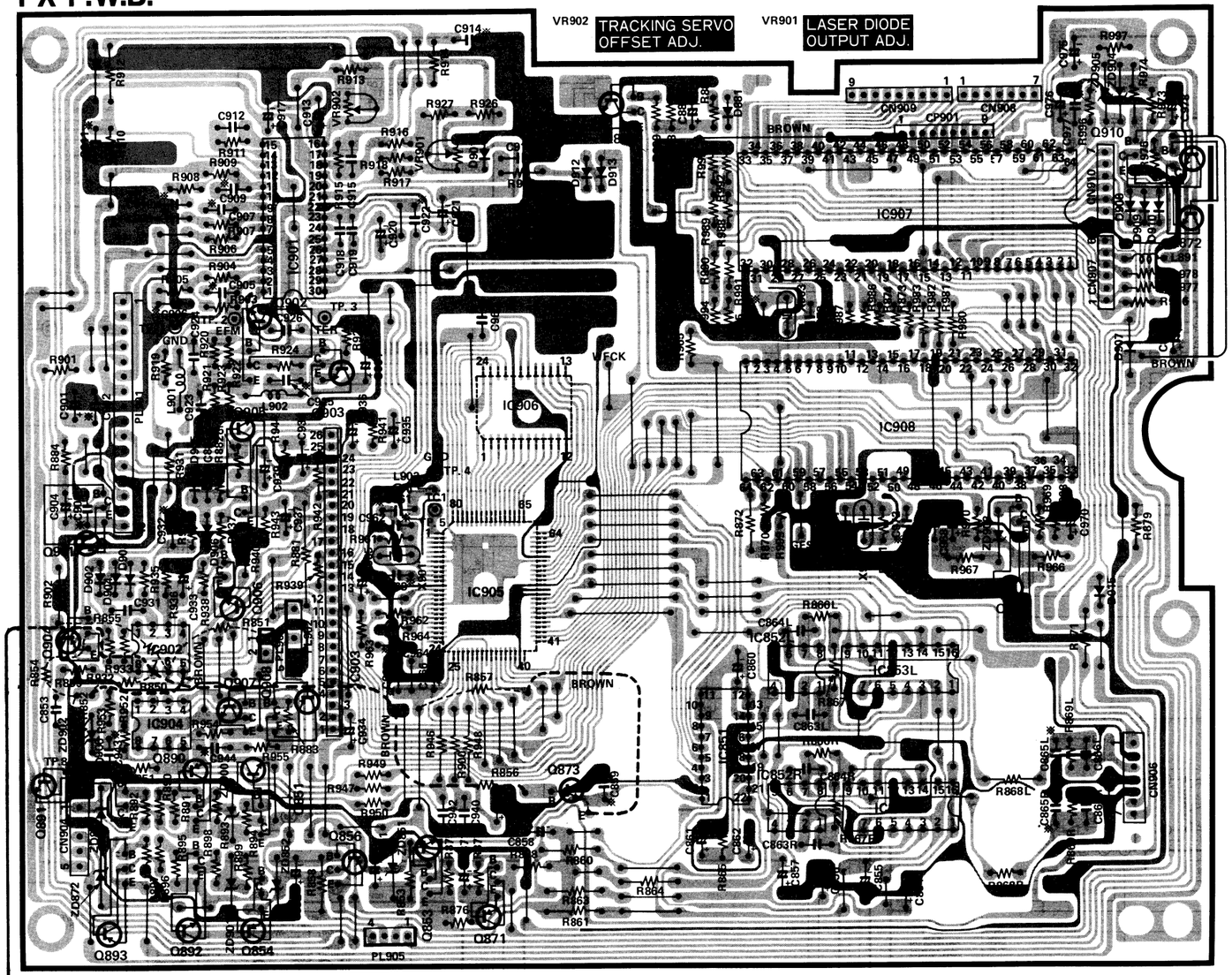


SWITCH P.W.B.

S909 OPERATE SWITCH



PX P.W.B.



S1 OPEN/CLOSE SWITCH

S2 LASER SWITCH

IC907

Pin No	Voltage
1	4.3
2	0
3, 4	5.0
5	0
6	2.3
7	0
8~10	5.0
11	5.1
12	5.0
13~15	0
16,17	5.1
18	0
19	5.1
20~24	0
25,26	1.1
27	0
28	1.1
29	0
30,31	2.3
32	0
33	−1.3
34	−21.0
35	−13
36~40	−9.6
41,42	0.9
43	1.0
44	1.3
45~48	0
49~56	−21.0
57	−24.0
58	−4.1
59,60	0
61,62	1.2
63	0
64	5.0

IC908

Pin No	Voltage
1	0
2	2.2
3	2.3
4	0
5	1.1
13	5.1
18~20	0
21	4.9
22	0
23~25	5.0
26	0
27	2.3
28~30	0
32	5.1
33	2.6
34	5.0
37	5.1
41,42	5.1
45~49	0
50	5.1
51,52	2.2
53	0
54	0.4
55	3.2
56	5.0
58	4.7
59~61	0
62	5.0
63	0
64	4.3

IC851

Pin No	Voltage
1	5.1
2	0
3, 4	1.9
5, 6	0.9
7	4.1
8	−5.1
9~13	−4.9
14	−3.0
15	0
16	−1.8
17~19	0
20	1.75
21	2.6
22	5.0

IC853L, R

Pin No	Voltage
1	4.9
2	−4.8
3	0.23
4~6	0
7	−4.8
8	0
9	1.3
10	0.41
11	1.3
12~14	0
15	−4.8
16	4.9

IC901

Pin No	Voltage
1~12	0
13,14	1.8
15	0
16	−5.1
17	4.4
18	0
19	0.4
20	5.1
21	2.4
22	0
23	5.1
24	2.5
25,26	0
27	0.57
28	0.55
29	0.58
30	0

IC902

Pin No	Voltage
1	−3.8
2	0.67
3	0.22
4	−5.1
5	−3.5
6	−4.6
7	46
8	5.1

IC904

Pin No	Voltage
1	8.9
2	0.54
3	0.53
4	−9.1
5, 6	0
7	0.56
8	9.3

IC903

Pin No	Voltage
1	5.1
2	−5.1
3	0.6
4	0
5	5.1
6	3.3
7	5.0
8	0.45
9	5.1
10	0
11	3.6
12~17	0
18	−9.2
19	0
20	9.3
21	0
22	0.31
23~26	0

IC905

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	3.5	26~29	0	54	2.2
2~4	5.1	30	3.1	55,56	0.17
5	2.5	31	4.9	57	4.1
6	2.0	32	5.1	58	5.1
7	5.1	33	0.45	59	0
8	0	34	5.0	60	2.7
9	2.1	35	0	61	3.3
10	2.3	36	4.6	62	2.5
11	2.4	37	5.1(0)	63	2.3
12	0	38.39	0	64	2.5
13	2.4	40	4.5	65	1.6
14	2.6	41	5.0	66	3.3
15	0	42	0	67~75	2.5
16	5.1	43	2.6	76,77	2.3
17	2.2	44	5.0	78	3.7
18	2.5	45,46	2.5	79	2.1
19~24	0	47~50	1.3	80	1.3
25	0(5.0)	51~53	0		

IC906

Pin No	Voltage
1~10	2.5
11	1.6
12	0
13	2.9
14	3.3
15	3.2
16	2.4
17	2.5
18	1.3
19	2.1
20	0
21	3.7
22	2.3
23	2.2
24	5.1

Circuit No.	Voltage E	C	B
Q851	9.3	11.8	9.9
Q853	5.1	9.3	5.7
Q854	−9.2	−11.2	−9.3
Q856	−5.1	−9.2	−5.7
Q871	0	−0.6	5.1
Q872	0	0.7	−0.6
Q881	0	0.9	0
Q890	11.8	11.8	11.1
Q891	0	0	0.71
Q892	−11.2	−11.1	−10.5
Q893	3.6	3.6	2.9

Circuit No.	Voltage E	C	B
Q901	0.5	−9.0	4.4
Q902	1.8	3.3	2.4
Q903	2.6	5.1	3.2
Q904	0.6	−5.1	4.4
Q905	0	0	−3.8
Q906	0	0	−3.8
Q907	−0.7	9.3	0.5
Q908	−0.7	−9.2	0.5
Q909	0	0	0.76
Q910	0	0	0.7

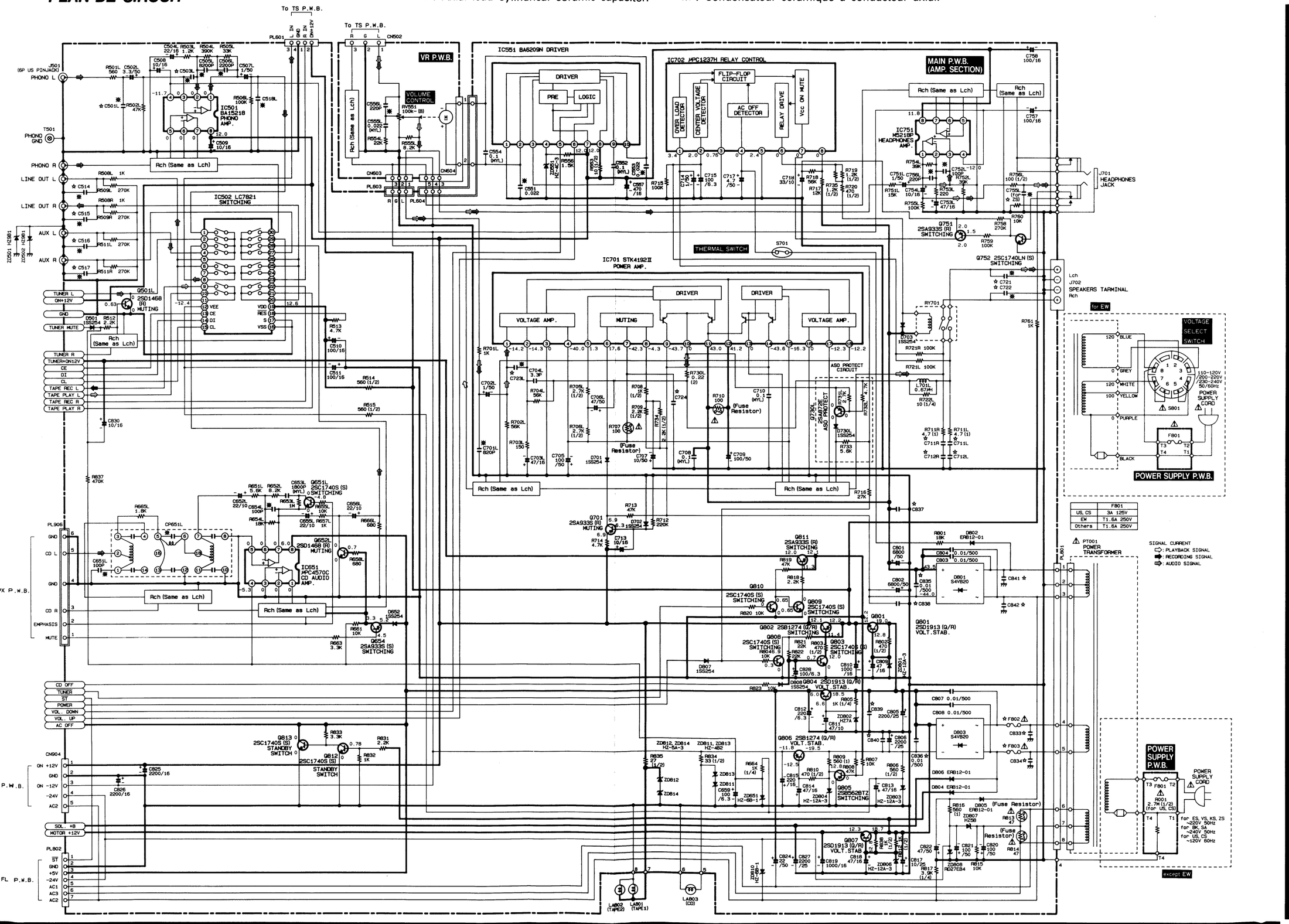
IC852L, R

Pin No	Voltage
1	0.23
2, 3	0
4	−4.9
5~7	0
8	4.8

CIRCUIT DIAGRAM · PLAN DE CIRCUIT

[■■■ : +B, ■■■ : −B]

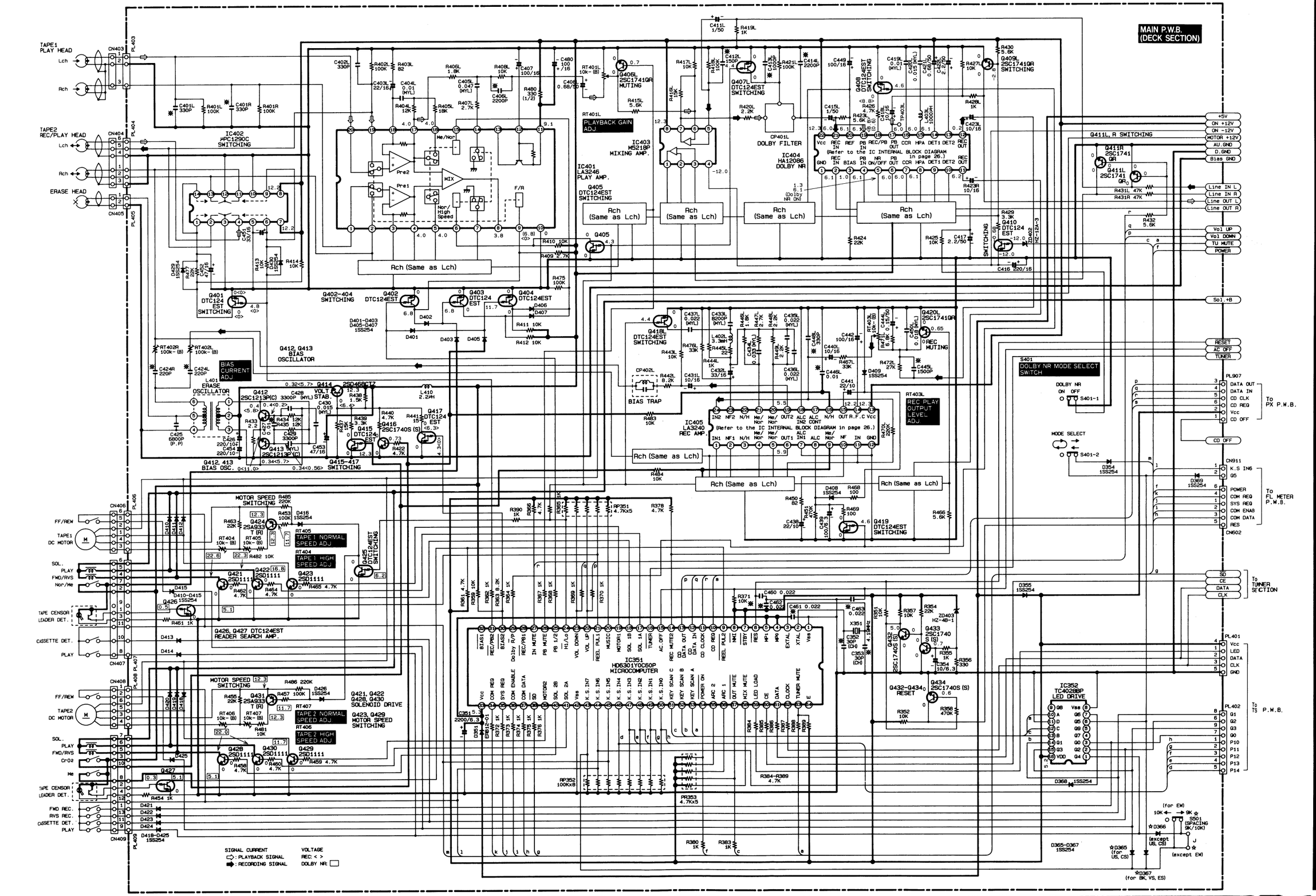
The circuit symbol (☆) means difference for destination. (Refer to the table in page 24∼26.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 24∼26.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



CIRCUIT DIAGRAM · PLAN DE CIRCUIT

〔■■ : +B, ▬ : −B〕

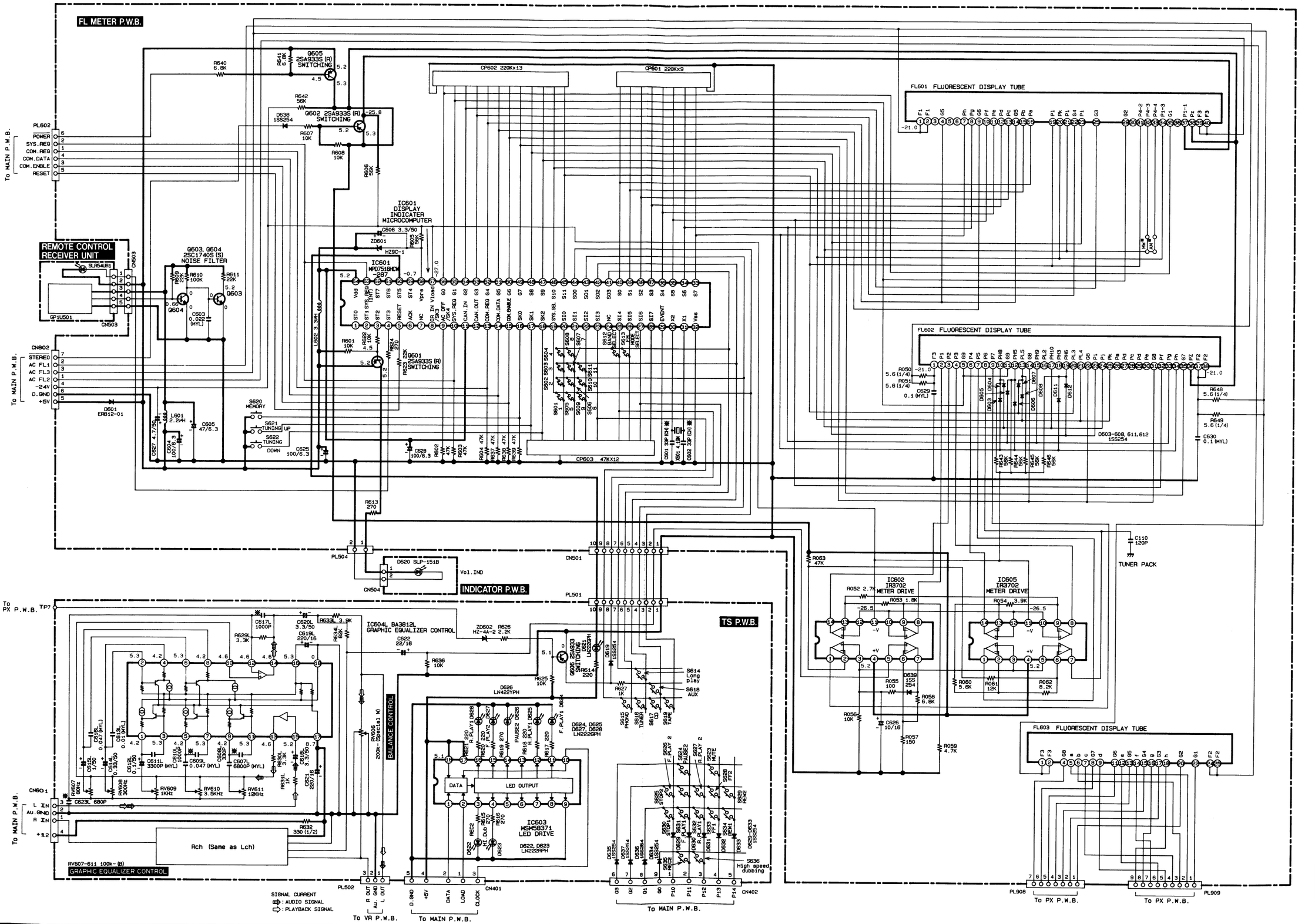
The circuit symbol (☆) means difference for destination. (Refer to the table in page 24~26.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 24~26.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



CIRCUIT DIAGRAM · PLAN DE CIRCUIT

〔■■■ : +B, ▬▬ : −B〕

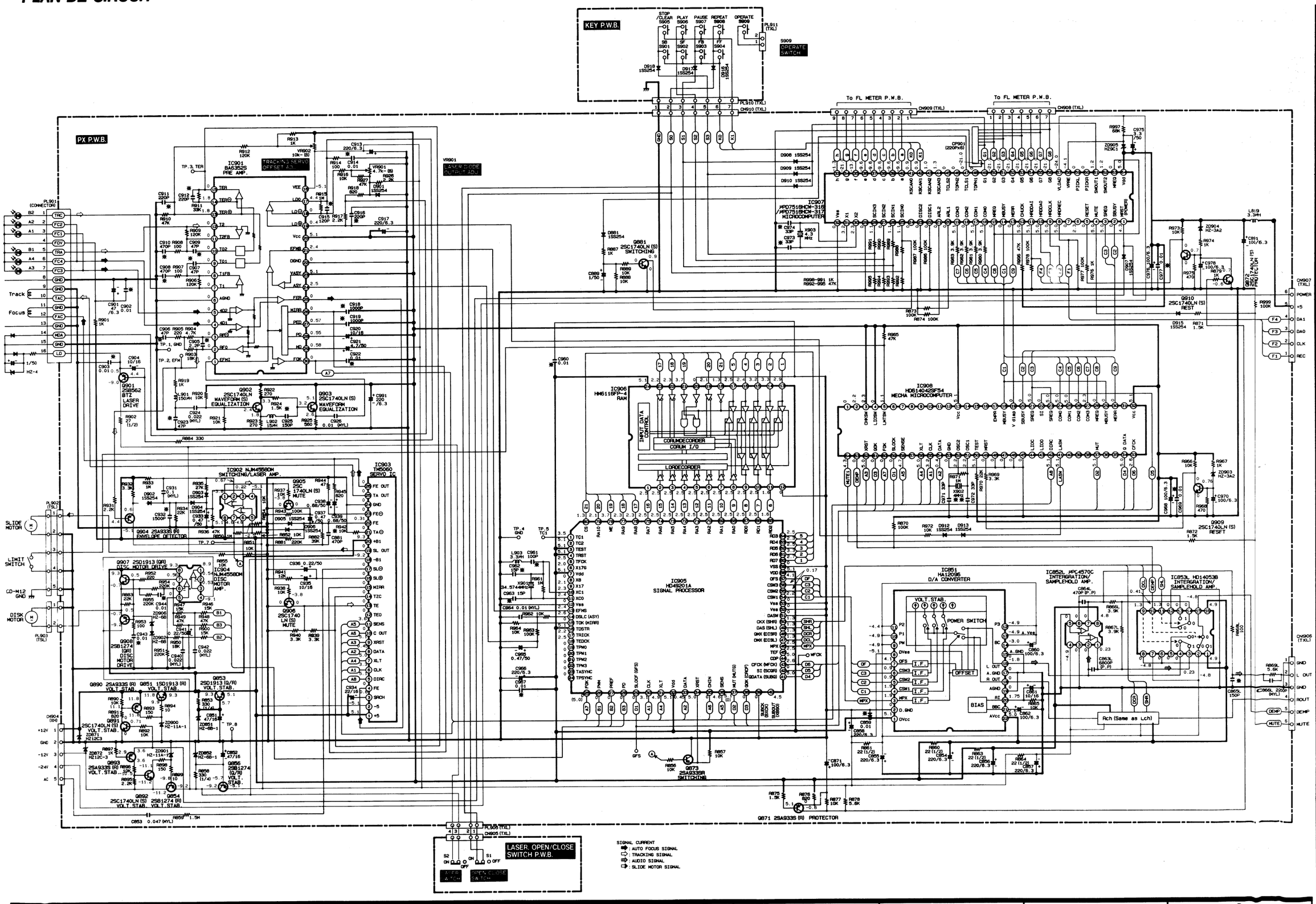
The circuit symbol (☆) means difference for destination. (Refer to the table in page 24~26.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 24~26.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.



CIRCUIT DIAGRAM · PLAN DE CIRCUIT

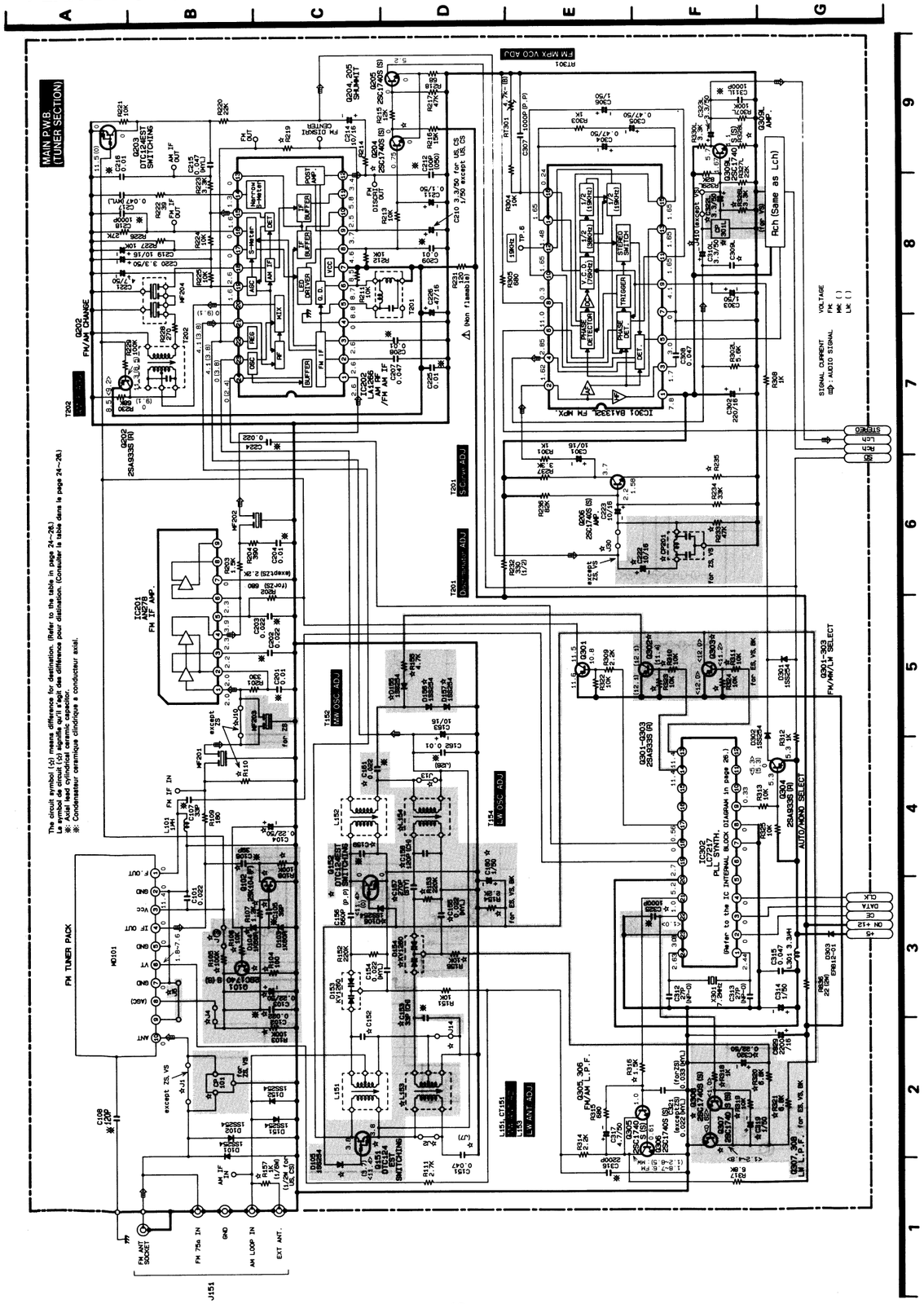
[■■■ : +B, ▬▬ : −B]

The circuit symbol (☆) means difference for destination. (Refer to the table in page 24~26.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 24~26.)
※ : Axial lead cylindrical ceramic capacitor. ※ : Condensateur ceramique a conducteur axial.

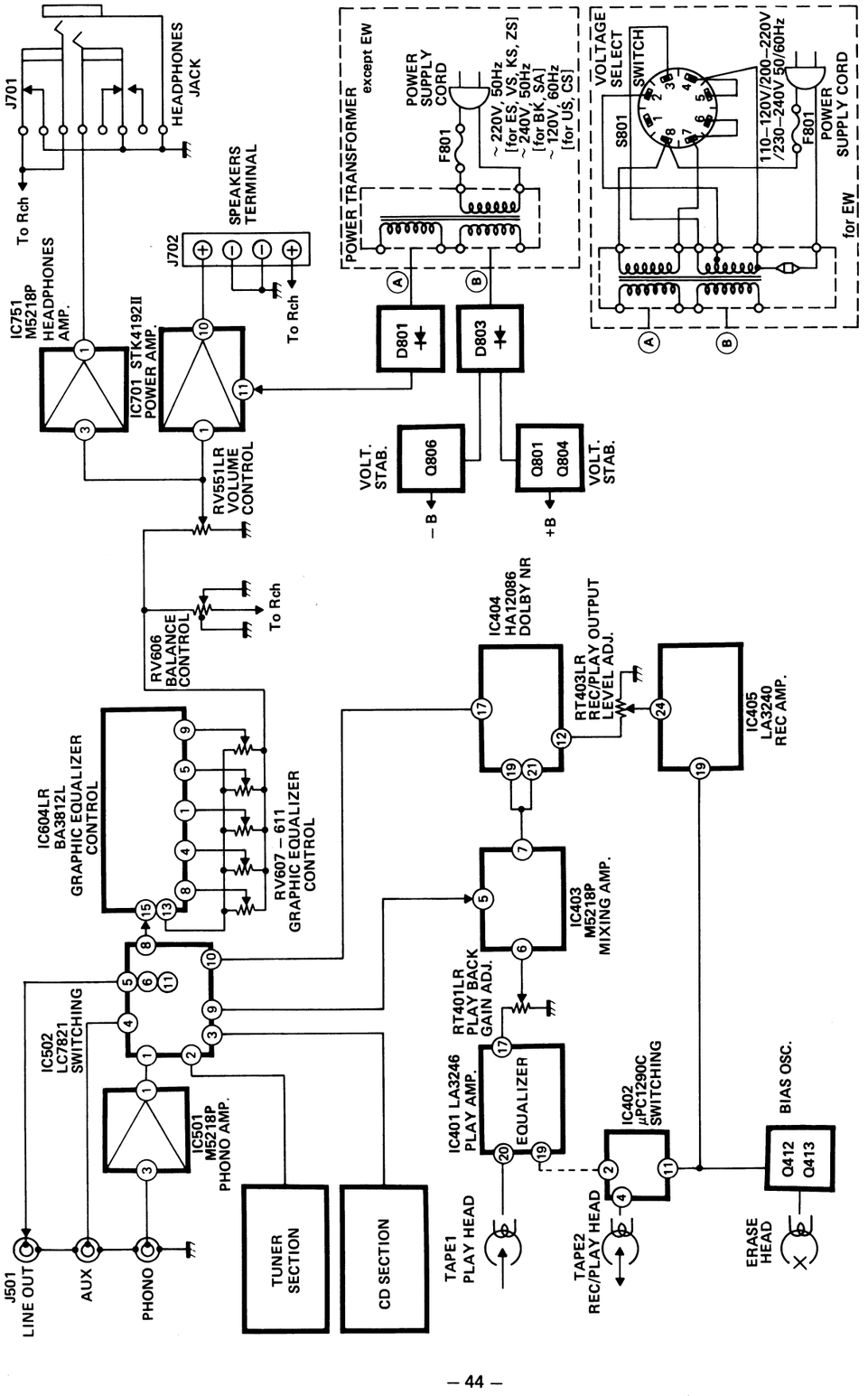


CIRCUIT DIAGRAM
PLAN DE CIRCUIT

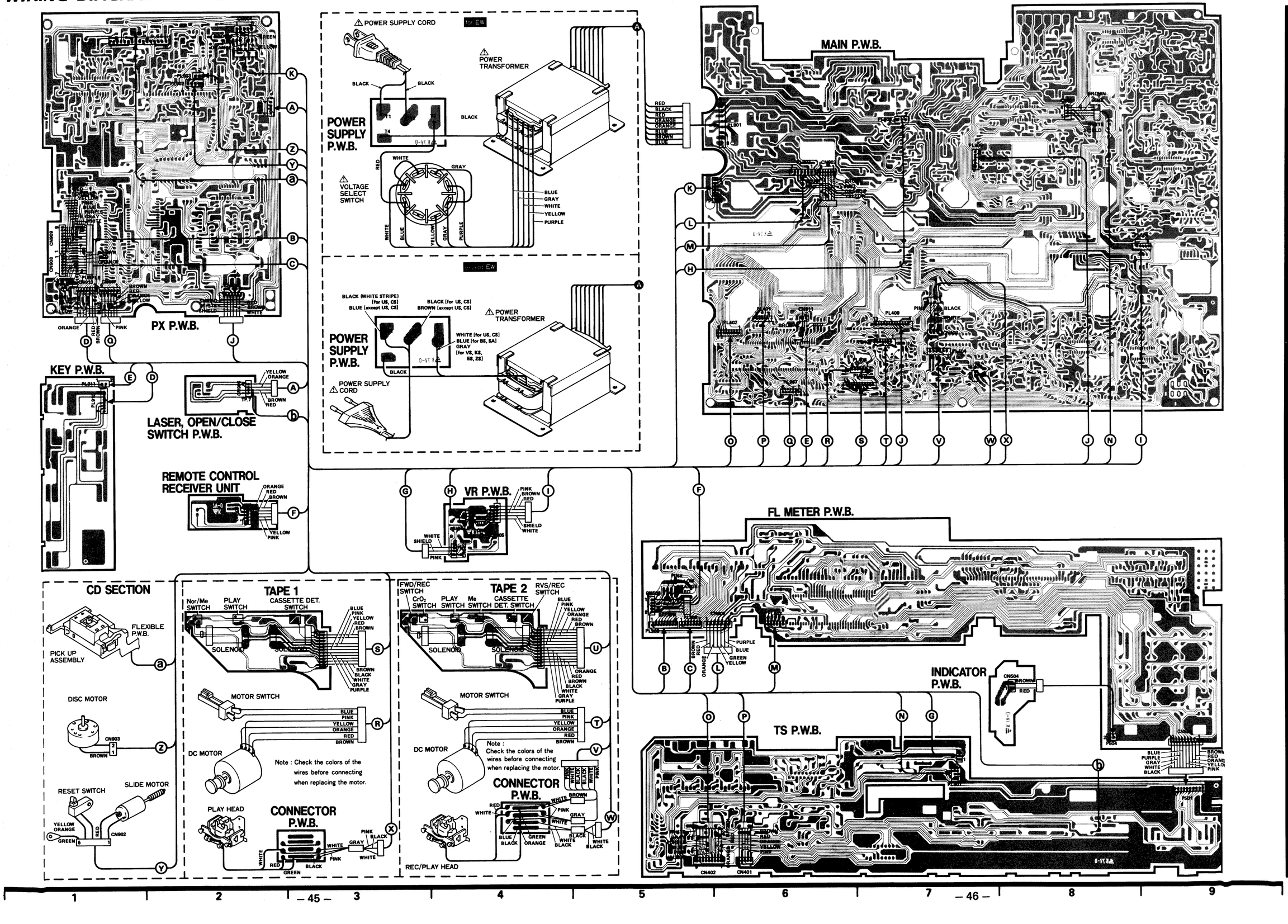
[■■■ : +B, ——— : −B]


MAIN P.W.B (TUNER SECTION)
FM TUNER PACK
FM MPX VCO ADJ
IC301 BA1332 FM MPX
IC201 AN276 FM IF AMP.
IC151 LA1266 FM AM IF
Q202 FM/AM CHANGE
Q203 DTC124EST SWITCHING
Q204, 205 SLA4411T
Q206 2SC1740S (S)
Q207 2SA933S (R)
Q301-303 FM/AM SELECT
Q304 2SA933S (R)
T201 S.C.Curve ADJ.
T202 FM IF
T151 AM OSC ADJ.
T152 AM OSC ADJ.
L151, C151 L152, C152 L153 LW ANT ADJ.
IC302 LC72311 PLL SYNTH.
(Refer to the IC INTERNAL BLOCK DIAGRAM in page 26.)
FM ANT SOCKET
FM 75Ω IN
GND
AM LOOP IN
EXT ANT.
J151
Rch (Same as Lch)
STEREO
SIGNAL CURRENT
AUDIO SIGNAL
VOLTAGE
FM
MW ( )
LW ( )
The circuit symbol (☆) means difference for destination. (Refer to the table in page 24–26.)
Le symbol de circuit (☆) signifie qu'il s'agit des différence pour distination. (Consulter la table dans le page 24–26.)
※: Ajustement prohibé/ajustage interdit
※: Condensateur céramique cilindrique a conducteur axial.

BLOCK DIAGRAM · SCHÉMA

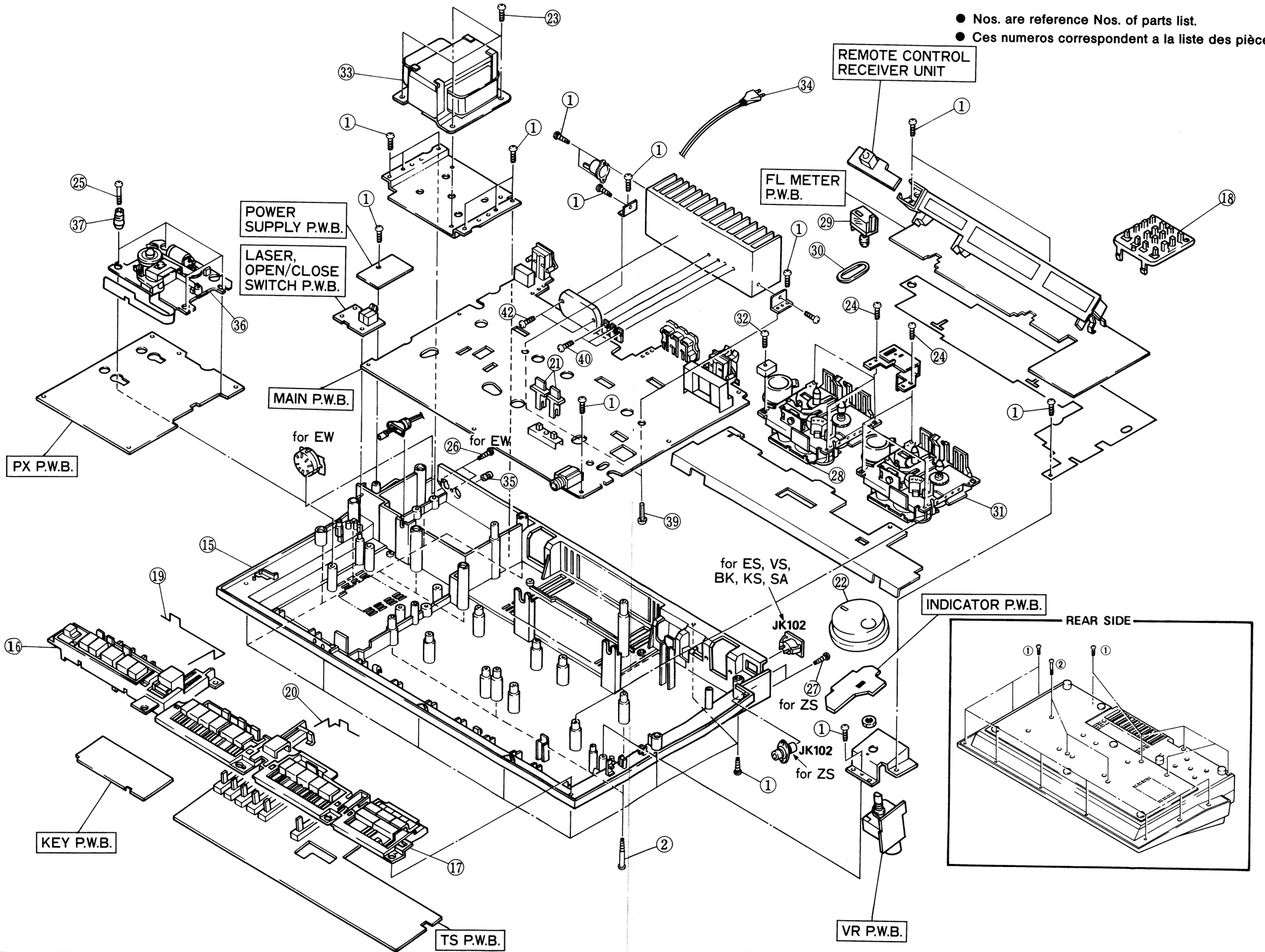


WIRING DIAGRAM · SCHÉMA DE CÂBLAGE



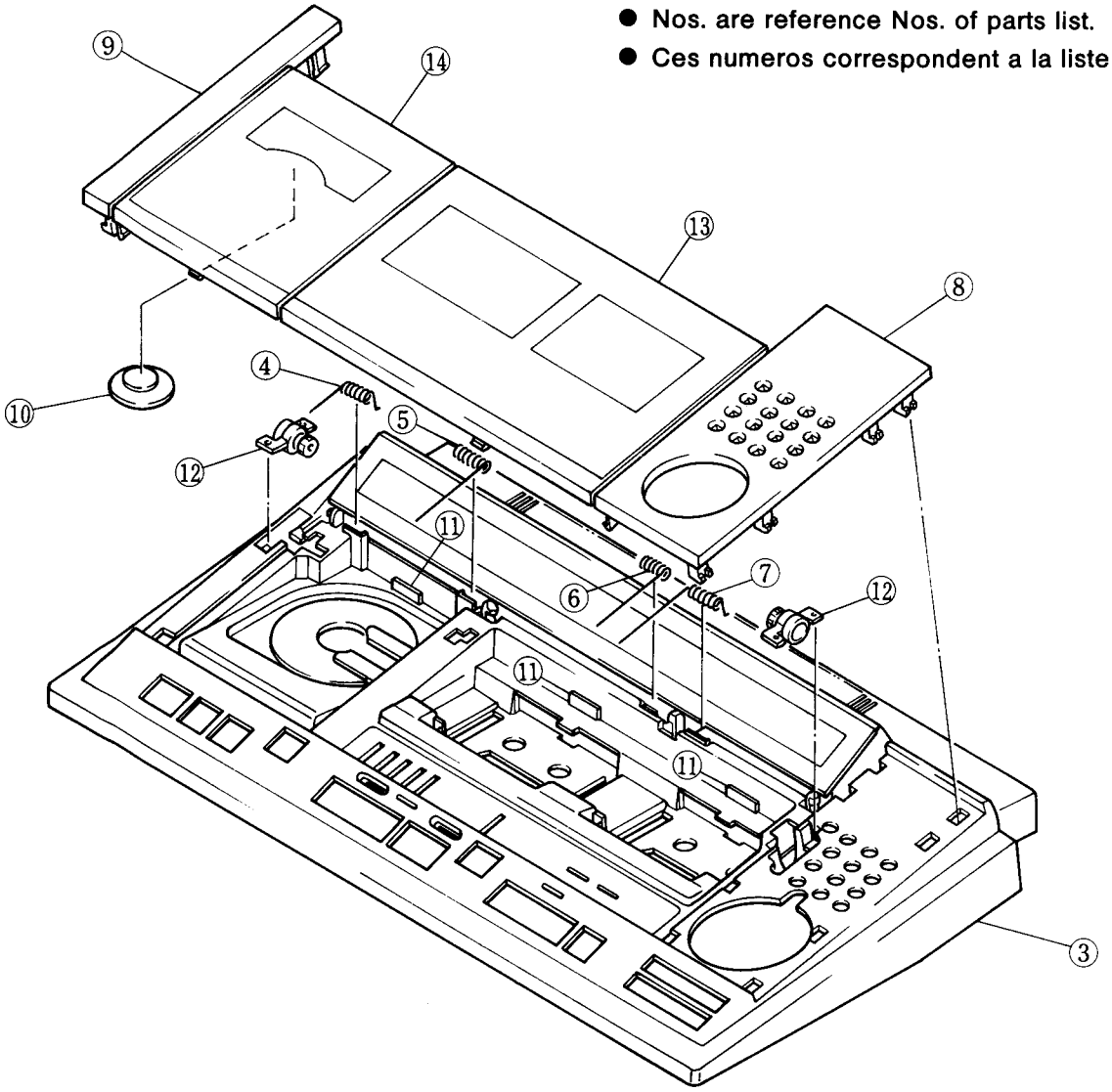
EXPLODED VIEW (Cabinet) VUE EXPLOSEE (Coffret)

- Nos. are reference Nos. of parts list.
- Ces numeros correspondent a la liste des pièces.

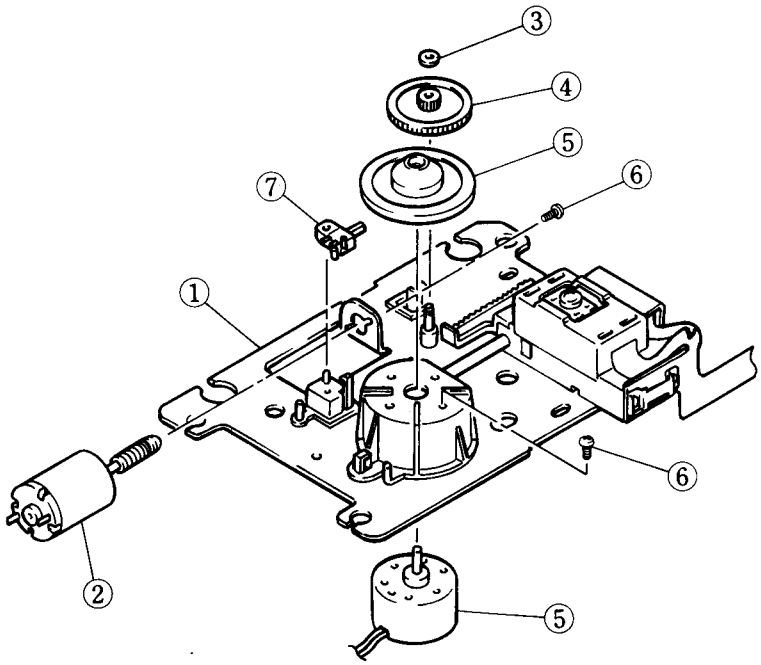


EXPLODED VIEW (Cabinet) *VUE EXPLOSEE (Coffert)*

- Nos. are reference Nos. of parts list.
- Ces numeros correspondent a la liste des pièces.

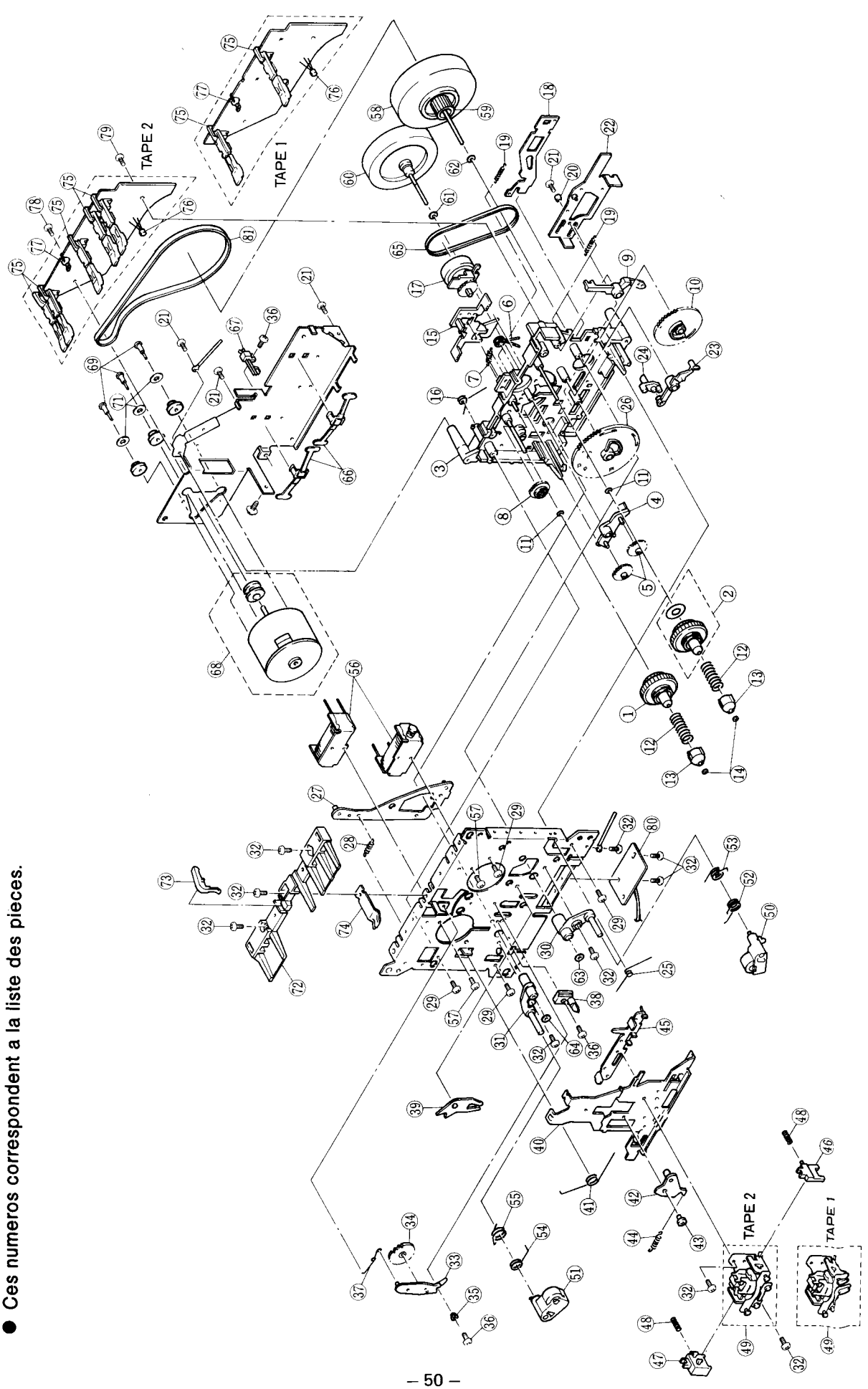


EXPLODED VIEW (Unit mechanism) *VUE EXPLOSEE (Méchanism de barre)*



EXPLODED VIEW (Cassette Chassis)

VUE EXPLOSEE (Chassis de Cassette)



- Nos. are reference Nos. of parts list.
- Ces numeros correspondent a la liste des pieces.

PEPLACEMENT PARTS LIST
TABLEAU DES PIÈCES

CC: Cylindrical ceramic EL: Electrolytic NF: Non flammable
CD: Ceramic discal FR: Fuse resistor PP: Polypro-pylene
CF: Carbon film ME: Metal oxide ST: Styrol
CO: Composition MF: Mylar film

SYMBOL No.	PART No.	DESCRIPTION
		CAPACITORS
C101	0244173	CD 0.022 μF +80 −20% 50V
C102	0240066	CC 0.022 μF +80 −20% 25V
		[for ZS]
C103	0252455	EL 0.22 μF ±20% 50V
		[for ZS]
C104	0252455	EL 0.22 μF ±20% 50V
		[for ZS]
C105	0230626	CC 39PF ±5% 50V
		[for ZS]
C106	0230626	CC 39PF ±5% 50V
		[for ZS]
C107	0230624	CC 33PF ±5% 50V
C108	0240034	CC 120PF ±10% 50V
C110	0248686	CD 120PF ±5% 50V
C151	0244175	CD 0.047 μF +80 −20% 50V
C152	0230649	CC 5.6PF ±5% 50V
		[for ES, VS, BK]
	0230651	CC 8.2PF ±5% 50V
		[for KS, ZS, SA]
	0230647	CC 3.9PF ±5% 50V
		[for US, CS, EW]
C153	0230074	CC 33PF ±5% 50V
		[for ES, VS, BK]
C154	0275013	MF 0.022 μF ±10% 50V
C155	0275013	MF 0.022 μF ±10% 50V
		[for ES, VS, BK]
C156	0279340	PP 560PF ±5% 100V
C157	0228321	ST 270PF ±5% 50V
		[for ES, VS, BK]
C158	1246466	CD 120PF ±5% 50V
		[for ES, VS, BK]
C159	0230658	CC 18PF ±5% 50V
		[except KS, ZS, SA]
	1246448	CD 22PF ±5% 50V
		[for KS, ZS, SA]
C160	0252459	EL 1 μF ±20% 50V
		[for ES, VS, BK]
C161	0240066	CC 0.022 μF +80 −20% 25V
		[for ES, VS, BK]
C162	0240061	CC 0.01 μF ±30% 16V
C163	0252422	EL 10 μF ±20% 16V
C201	0240061	CC 0.01 μF ±30% 16V
C202	0240066	CC 0.022 μF +80 −20% 25V
C203	0240066	CC 0.022 μF +80 −20% 25V
C204	0240061	CC 0.01 μF ±30% 16V
C207	0244175	CD 0.047 μF +80 −20% 50V
C208	0240061	CC 0.01 μF ±30% 16V
C209	0240061	CC 0.01 μF ±30% 16V
C210	0252461	EL 3.3 μF ±20% 50V
		[for US, CS]
	0252459	EL 1 μF ±20% 50V
		[except US, CS]
C211	0252459	EL 1 μF ±20% 50V
C212	0240033	CC 100PF ±10% 50V
C214	0252422	EL 10 μF ±20% 16V
C215	0275015	MF 0.047 μF ±10% 50V
C216	0240061	CC 0.01 μF ±30% 16V
C217	0275015	MF 0.047 μF ±10% 50V
C218	0240045	CC 1000PF ±10% 50V
C219	0252422	EL 10 μF ±20% 16V
C220	0252461	EL 3.3 μF ±20% 50V
C221	1252462	EL 4.7 μF ±20% 50V
C222	0252422	EL 10 μF ±20% 16V
		[for VS, ZS]
C223	0252422	EL 10 μF ±20% 16V
C224	0240066	CC 0.022 μF +80 −20% 25V
C225	0240061	CC 0.01 μF ±30% 16V
C226	0252425	EL 47 μF ±20% 16V
C301	0252422	EL 10 μF ±20% 16V
C302	0252427	EL 220 μF ±20% 16V
C303	0252459	EL 1 μF ±20% 50V
C304	0252457	EL 0.47 μF ±20% 50V
C305	0252457	EL 0.47 μF ±20% 50V
C306	1252459	EL 1 μF ±20% 50V
C307	1279336	PP 1000PF ±5% 100V
C308	1244185	CD 0.047 μF +80 −20% 50V
C309LR	1275032	MF 0.018 μF ±10% 50V
		[for US, CS]
	1275031	MF 0.012 μF ±10% 50V
		[except US, CS]
C310LR	0252461	EL 3.3 μF ±20% 50V
C311LR	0240045	CC 1000PF ±10% 50V
C312	1246450	CD 27PF ±5% 50V
C313	1246450	CD 27PF ±5% 50V
C314	0252459	EL 1 μF ±20% 50V
C315	0244175	CD 0.047 μF +80 −20% 50V
C316	0240053	CC 2200PF ±20% 16V
C317	0252462	EL 4.7 μF ±20% 50V
C319	0252459	EL 1 μF ±20% 50V
		[for ES, VS, BK]
C320	0252455	EL 0.22 μF ±20% 50V
		[for ES, VS, BK]
C321	0275013	MF 0.022 μF ±10% 50V
		[except ZS]
	0275014	MF 0.033 μF ±10% 50V
		[for ZS]
C322LR	0252461	EL 3.3 μF ±20% 50V
		[for VS]
C323LR	0252461	EL 3.3 μF ±20% 50V
C325	0240045	CC 1000PF ±10% 50V
		[for ES, VS, BK]
C351	0252407	EL 2200 μF ±20% 6.3V
C352	0230073	CC 30PF ±5% 50V
C353	0230073	CC 30PF ±5% 50V
C354	1252402	EL 100 μF ±20% 6.3V
C401LR	0240039	CC 330PF ±10% 50V
C402LR	0240039	CC 330PF ±10% 50V
C403LR	0252423	EL 22 μF ±20% 16V
C404LR	0275011	MF 0.01 μF ±10% 50V
C405LR	0275015	MF 0.047 μF ±10% 50V
C406LR	0240053	CC 2200PF ±20% 16V
C407	0252426	EL 100 μF ±20% 16V
C408LR	0252458	EL 0.68 μF ±20% 50V
C411LR	0252459	EL 1 μF ±20% 50V
C412LR	0240035	CC 150PF ±10% 50V
C413LR	0240045	CC 1000PF ±10% 50V
C414LR	0240053	CC 2200PF ±20% 16V
C415LR	0252459	EL 1 μF ±20% 50V
C416	0252427	EL 220 μF ±20% 16V
C417	0252460	EL 2.2 μF ±20% 50V
C418LR	0252422	EL 10 μF ±20% 16V
C419L	1275011	MF 0.01 μF ±10% 50V
C419R	0275011	MF 0.01 μF ±10% 50V
C420LR	0275012	MF 0.015 μF ±10% 50V
C421LR	0252458	EL 0.68 μF ±20% 50V
C422LR	0252460	EL 2.2 μF ±20% 50V
C423LR	0252422	EL 10 μF ±20% 16V
C424LR	0240037	CC 220PF ±10% 50V
C425	1279332	PP 6800PF ±5% 100V
C426	0252415	EL 220 μF ±20% 10V
C427	0240061	CC 0.01 μF ±30% 16V
C428	0274014	MF 3300PF ±10% 50V
C429	0274014	MF 3300PF ±10% 50V
C430	0275012	MF 0.015 μF ±10% 50V
C431L	1252422	EL 10 μF ±20% 16V
C431R	0252422	EL 10 μF ±20% 16V
C432LR	1252424	EL 33 μF ±20% 16V
C433LR	0274036	MF 8200PF ±10% 50V
C434LR	0275014	MF 0.033 μF ±10% 50V
C435LR	0275013	MF 0.022 μF ±10% 50V
C436LR	0275103	MF 0.022 μF ±10% 50V
C437L	0275013	MF 0.022 μF ±10% 50V
C437R	1275013	MF 0.022 μF ±10% 50V
C438	0252411	EL 22 μF ±20% 10V
C439	0252402	EL 100 μF ±20% 6.3V
C440LR	0252422	EL 10 μF ±20% 16V
C441	0252411	EL 22 μF ±20% 10V
C442	0252426	EL 100 μF ±20% 16V
C444LR	0252804	EL 0.15 μF ±20% 50V
C445LR	0240051	CC 1500PF ±20% 16V
C446LR	0240061	CC 0.01 μF ±30% 16V
C448LR	0240039	CC 330PF ±10% 50V
C449	0252426	EL 100 μF ±20% 16V
C450L	1275032	MF 0.018 μF ±10% 50V
C450R	0275032	MF 0.018 μF ±10% 50V
C451	0252424	EL 33 μF ±20% 16V
C452	0252425	EL 47 μF ±20% 16V
C453	1252425	EL 47 μF ±20% 16V
C454	0252415	EL 220 μF ±20% 10V
C460	0240066	CC 0.022 μF +80 −20% 25V
C461	0240066	CC 0.022 μF +80 −20% 25V
C462	0240066	CC 0.022 μF +80 −20% 25V
C463	0240066	CC 0.022 μF +80 −20% 25V
C480	0252426	EL 100 μF ±20% 16V
C501LR	0240035	CC 150PF ±10% 50V
		[except ZS]
	0240053	CC 2200PF ±20% 16V
		[for ZS]
C502LR	0252461	EL 3.3 μF ±20% 50V
C503LR	0240041	CC 470PF ±10% 50V
		[for ZS]
	0240033	CC 100PF ±10% 50V
		[except ZS]
C504LR	0252423	EL 22 μF ±20% 16V
C505LR	0240060	CC 8200PF ±30% 16V
C506LR	0240053	CC 2200PF ±20% 16V
C507LR	0252459	EL 1 μF ±20% 50V
C508	0252422	EL 10 μF ±20% 16V
C509	1252422	EL 10 μF ±20% 16V
C510	0252426	EL 100 μF ±20% 16V
C511	0252426	EL 100 μF ±20% 16V

SYMBOL No.	PART No.	DESCRIPTION
C514	0240045	CC 1000PF ±10% 50V [for ZS]
C515	0240045	CC 1000PF ±10% 50V [for ZS]
C516	0240037	CC 220PF ±10% 50V [for ZS]
C517	0240037	CC 220PF ±10% 50V [for ZS]
C518LR	0240043	CC 680PF ±10% 50V [for ZS]
C551	0240066	CC 0.022 μF +80% −20% 25V
C552	0276011	MF 0.1 μF ±10% 50V
C553	0240066	CC 0.022 μF +80% −20% 25V
C554	1276011	MF 0.1 μF ±10% 50V
C555LR	0275013	MF 0.022 μF ±10% 50V
C556LR	0240037	CC 220 μF ±10% 50V
C557	1252429	EL 470 μF ±20% 16V
C601	0230074	CC 33PF ±5% 50V
C602	0230074	CC 33PF ±5% 50V
C603	0275013	MF 0.022 μF ±10% 50V
C604	0252402	EL 100 μF ±20% 6.3V
C605	0252401	EL 47 μF ±20% 6.3V
C606	0252461	EL 3.3 μF ±20% 50V
C607LR	0274016	MF 6800PF ±10% 50V
C608LR	0240039	CC 330PF ±10% 50V
C609LR	0275015	MF 0.047 μF ±10% 50V
C610LR	0240045	CC 1000PF ±10% 50V
C611LR	0274014	MF 3300PF ±10% 50V
C612LR	0252454	EL 0.1 μF ±20% 50V
C613LR	0275011	MF 0.01 μF ±10% 50V
C614LR	0252456	EL 0.33 μF ±20% 50V
C615LR	0252459	EL 1 μF ±20% 50V
C616LR	0275015	MF 0.047 μF ±10% 50V
C617LR	0240045	CC 1000PF ±10% 50V
C618LR	0252461	EL 3.3 μF ±20% 50V
C619LR	0252427	EL 220 μF ±20% 16V
C620LR	0252461	EL 3.3 μF ±20% 50V
C621	0252427	EL 220 μF ±20% 16V
C622	0252423	EL 22 μF ±20% 16V
C623LR	0240043	CC 680PF ±10% 50V
C625	0252402	EL 100 μF ±20% 6.3V
C626	0252422	EL 10 μF ±20% 16V
C627	0252462	EL 4.7 μF ±20% 50V
C628	0252402	EL 100 μF ±20% 6.3V
C629	0276011	MF 0.1 μF ±10% 50V
C630	0276011	MF 0.1 μF ±10% 50V
C651LR	0240033	CC 100PF ±10% 50V
C652LR	0252411	EL 22 μF ±20% 10V
C653LR	1274032	MF 1800PF ±10% 50V
C654LR	0240033	CC 100PF ±10% 50V
C655L	1252411	EL 22 μF ±20% 10V
C655R	0252411	EL 22 μF ±20% 10V
C656LR	0252411	EL 22 μF ±20% 10V
C659	0252402	EL 100 μF ±20% 6.3V
C701LR	0240044	CC 820PF ±10% 50V
C702LR	0252459	EL 1 μF ±20% 50V
C703LR	0252425	EL 47 μF ±20% 16V
C704LR	0230606	CC 3.3PF ±10% 50V
C705	0252467	EL 100 μF ±20% 50V
C706L	1252466	EL 47 μF ±20% 50V
C706R	0252466	EL 47 μF ±20% 50V

SYMBOL No.	PART No.	DESCRIPTION
C707	0252463	EL 10 μF ±20% 50V
C708	1276011	MF 0.1 μF ±10% 50V
C709	0252467	EL 100 μF ±20% 50V
C710	1276011	MF 0.1 μF ±10% 50V
C711LR	1276011	MF 0.1 μF ±10% 50V [for BK]
C711LR	0275015	MF 0.047 μF ±10% 50V [except BK]
C712LR	1276011	MF 0.1 μF ±10% 50V [for BK]
C713	0252422	EL 10 μF ±20% 16V
C714	0252459	EL 1 μF ±20% 50V
C715	0252402	EL 100 μF ±20% 6.3V
C717	0252462	EL 4.7 μF ±20% 50V
C718	1252412	EL 33 μF ±20% 10V
C721	0240066	CC 0.022 μF +80% −20% 25V
C722	0240066	CC 0.022 μF +80% −20% 25V
C723LR	0244141	CD 0.01 μF ±10% 50V [for ZS]
C724	0244175	CD 0.01 μF +80% −20% 50V [for ZS]
C751LR	0252459	EL 1 μF ±20% 50V
C752LR	0240033	CC 100 μF ±10% 50V
C753LR	0252425	EL 47 μF ±20% 16V
C754LR	0252422	EL 10 μF ±20% 16V
C755LR	0240045	CC 1000PF ±10% 50V [for ZS]
C756LR	0240037	CC 220PF ±10% 50V
C757	1252426	EL 100 μF ±20% 16V
C758	0252426	EL 100 μF ±20% 16V
C801	0259931	EL 6800 μF ±20% 50V
C802	0259931	EL 6800 μF ±20% 50V
C803	0245408	CD 0.01 μF ±20% 500V
C804	0245408	CD 0.01 μF ±20% 500V
C805	1252442	EL 2200 μF ±20% 25V
C806	1252442	EL 2200 μF ±20% 25V
C807	0245408	CD 0.01 μF ±20% 500V
C808	0245408	CD 0.01 μF ±20% 500V
C809	0252425	EL 47 μF ±20% 16V
C810	1252430	EL 1000 μF ±20% 16V
C811	0252413	EL 47 μF ±20% 10V
C812	1252403	EL 220 μF ±20% 6.3V
C813	0252425	EL 47 μF ±20% 16V
C814	0252425	EL 47 μF ±20% 16V
C815	0252427	EL 220 μF ±20% 16V
C817	0252433	EL 10 μF ±20% 25V
C818	0252425	EL 47 μF ±20% 16V
C819	1252430	EL 1000 μF ±20% 16V
C820	0252467	EL 100 μF ±20% 50V
C821	0252467	EL 100 μF ±20% 50V
C822	0252466	EL 47 μF ±20% 50V
C824	0252464	EL 22 μF ±20% 50V
C825	1252431	EL 2200 μF ±20% 16V
C826	1252431	EL 2200 μF ±20% 16V
C827	1252442	EL 2200 μF ±20% 25V
C828	0252402	EL 100 μF ±20% 6.3V
C829	1252431	EL 2200 μF ±20% 16V
C830	0252422	EL 10 μF ±20% 16V
C833	0209773	CD 0.022 μF ±20% 50V [for ZS]

SYMBOL No.	PART No.	DESCRIPTION
C834	0209773	CD 0.022 μF ±20% 50V [for ZS]
C835	0245408	CD 0.01 μF ±20% 500V [for ZS]
C836	0245408	CD 0.01 μF ±20% 500V [for ZS]
C837	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C838	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C839	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C840	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C841	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C842	0244173	CD 0.022 μF +80% −20% 50V [for ZS]
C851	0252525	EL 47 μF ±20% 16V
C852	0252525	EL 47 μF ±20% 16V
C853	0175015	MF 0.047 μF ±10% 50V
C854	0252403	EL 220 μF ±20% 6.3V
C855	0252403	EL 220 μF ±20% 6.3V
C856	0252403	EL 220 μF ±20% 6.3V
C857	0252403	EL 220 μF ±20% 6.3V
C858	1252403	EL 220 μF ±20% 6.3V
C859	0240061	CC 0.01 μF ±30% 16V
C860	0252402	EL 100 μF ±20% 6.3V
C861	0252521	EL 10 μF ±20% 16V
C862	0252402	EL 100 μF ±20% 6.3V
C863LR	0279332	PP 6800PF ±5% 100V
C864LR	0279328	PP 470PF ±5% 100V
C865LR	0240035	CC 150PF ±10% 50V
C866LR	0274013	MF 2200PF ±10% 50V
C871	0252402	EL 100 μF ±20% 6.3V
C881	0240041	CC 470PF ±10% 50V
C889	0252811	EL 1 μF ±20% 50V
C891	0252402	EL 100 μF ±20% 6.3V
C901	0252225	EL 47 μF ±20% 6.3V
C902	0240061	CC 0.01 μF ±30% 16V
C903	0240061	CC 0.01 μF ±30% 16V
C904	0252521	EL 10 μF ±20% 16V
C905	0230604	CC 2.2PF ±10% 50V
C906	0230628	CC 47PF ±5% 50V
C907	0230628	CC 47PF ±5% 50V
C908	0240041	CC 470PF ±10% 50V
C909	0230628	CC 47PF ±5% 50V
C910	0240041	CC 470PF ±10% 50V
C911	0240037	CC 220PF ±10% 50V
C912	0240037	CC 220PF ±10% 50V
C913	0252403	EL 220 μF ±20% 6.3V
C914	0240061	CC 0.01 μF ±30% 16V
C915	0240034	CC 120PF ±10% 50V
C916	0240037	CC 220PF ±10% 50V
C917	0252403	EL 220 μF ±20% 6.3V
C918	0240045	CC 1000PF ±10% 50V
C919	0240045	CC 1000PF ±10% 50V
C920	0252521	EL 10 μF ±20% 16V
C921	0252815	EL 4.7 μF ±20% 50V
C922	0240061	CC 0.01 μF ±30% 16V
C923	0230628	CC 47PF ±5% 50V

SYMBOL No.	PART No.	DESCRIPTION
C924	0275013	MF 0.022 μF ±10% 50V
C925	0240035	CC 150PF ±10% 50V
C926	0275011	MF 0.01 μF ±10% 50V
C931	0276011	MF 0.1 μF ±10% 50V
C932	0240051	CC 1500PF ±20% 16V
C933	0252805	EL 0.47 μF ±20% 50V
C934	0252522	EL 22 μF ±20% 16V
C935	0252521	EL 10 μF ±20% 16V
C936	0252802	EL 0.22 μF ±20% 50V
C937	0252805	EL 0.47 μF ±20% 50V
C938	0252807	EL 0.68 μF ±20% 50V
C939	0252807	EL 0.68 μF ±20% 50V
C940	0275013	MF 0.022 μF ±10% 50V
C941	0252802	EL 0.22 μF ±20% 50V
C942	0275013	MF 0.022 μF ±10% 50V
C943	0240061	CC 0.01 μF ±30% 16V
C944	0240061	CC 0.01 μF ±30% 16V
C960	0240061	CC 0.01 μF ±30% 16V
C961	0240033	CC 100PF ±10% 50V
C962	0230616	CC 15PF ±5% 50V
C963	0230616	CC 15PF ±5% 50V
C964	0275011	MF 0.01 μF ±10% 50V
C965	0252805	EL 0.47 μF ±20% 50V
C966	0252403	EL 220 μF ±20% 6.3V
C967	0240061	CC 0.01 μF ±30% 16V
C968	0252402	EL 100 μF ±20% 6.3V
C969	0240061	CC 0.01 μF ±30% 16V
C970	0252402	EL 100 μF ±20% 6.3V
C971	0230624	CC 33PF ±5% 50V
C972	0230624	CC 33PF ±5% 50V
C973	0230624	CC 33PF ±5% 50V
C974	0230624	CC 33PF ±5% 50V
C975	1252813	EL 3.3 μF ±20% 50V
C976	0252402	EL 100 μF ±20% 6.3V
C977	0240061	CC 0.01 μF ±30% 16V
C978	0252402	EL 100 μF ±20% 6.3V
C991	0252403	EL 220 μF ±20% 6.3V
		RESISTORS
⚠R001	0139005	CO 2.7MΩ ±10% RC1/2GF [for US, CS]
R050	0129519	CF 5.6Ω ±5% SRD1/4P
R051	0129519	CF 5.6Ω ±5% SRD1/4P
R052	0113625	CF 2.7KΩ ±5% SRD1/6P
R053	0113621	CF 1.8KΩ ±5% SRD1/6P
R054	0113629	CF 3.9KΩ ±5% SRD1/6P
R055	0113591	CF 100Ω ±5% SRD1/6P
R056	0113639	CF 10KΩ ±5% SRD1/6P
R057	0113595	CF 150Ω ±5% SRD1/6P
R058	0113635	CF 6.8KΩ ±5% SRD1/6P
R059	0113631	CF 4.7KΩ ±5% SRD1/6P
R060	0113633	CF 5.6KΩ ±5% SRD1/6P
R061	0113641	CF 12KΩ ±5% SRD1/6P
R062	0113637	CF 8.2KΩ ±5% SRD1/6P
R063	0113655	CF 47KΩ ±5% SRD1/6P
R103	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]
R104	0113591	CF 100Ω ±5% SRD1/6P [for ZS]
R105	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]

SYMBOL No.	PART No.	DESCRIPTION
R106	0113639	CF 10KΩ ±5% SRD1/6P [for ZS]
R107	0113617	CF 1.2KΩ ±5% SRD1/6P [for ZS]
R108	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]
R109	0113597	CF 180Ω ±5% SRD1/6P
R110	0113599	CF 220Ω ±5% SRD1/6P [except ZS]
R111	0113625	CF 2.7KΩ ±5% SRD1/6P
R151	0113639	CF 10KΩ ±5% SRD1/6P
R152	0113671	CF 220KΩ ±5% SRD1/6P
R153	0113671	CF 220KΩ ±5% SRD1/6P [for ES, VS, BK]
R154	0113623	CF 2.2KΩ ±5% SRD1/6P [for ES, VS, BK]
R155	0113631	CF 4.7KΩ ±5% SRD1/6P [for ES, VS, BK]
R156	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R157	0134373	CO 1KΩ ±10% RC1/2GF [for US, CS]
	0113615	CF 1KΩ ±5% SRD1/6P [except US, CS]
R201	0113603	CF 330Ω ±5% SRD1/6P
R202	0113623	CF 2.2KΩ ±5% SRD1/6P [except ZS]
	0113611	CF 680Ω ±5% SRD1/6P [for ZS]
R203	0113619	CF 1.5KΩ ±5% SRD1/6P
R204	0113605	CF 390Ω ±5% SRD1/6P
R211	0113639	CF 10KΩ ±5% SRD1/6P
R212	0113639	CF 10KΩ ±5% SRD1/6P
R213	0113639	CF 10KΩ ±5% SRD1/6P
R214	0113647	CF 22KΩ ±5% SRD1/6P [for US, CS]
	0113639	CF 10KΩ ±5% SRD1/6P [except US, CS]
R215	0113641	CF 12KΩ ±5% SRD1/6P
R216	0113643	CF 15KΩ ±5% SRD1/6P
R217	0113655	CF 47KΩ ±5% SRD1/6P
R218	0113587	CF 68Ω ±5% SRD1/6P
R219	0113643	CF 15KΩ ±5% SRD1/6P [for US, CS]
	0113651	CF 33KΩ ±5% SRD1/6P [except US, CS]
R220	0113647	CF 22KΩ ±5% SRD1/6P
R221	0113639	CF 10KΩ ±5% SRD1/6P
R222	0113581	CF 39Ω ±5% SRD1/6P
R223	0113627	CF 3.3KΩ ±5% SRD1/6P
R224	0113639	CF 10KΩ ±5% SRD1/6P
R225	0113639	CF 10KΩ ±5% SRD1/6P
R226	0113649	CF 27KΩ ±5% SRD1/6P
R227	0113639	CF 10KΩ ±5% SRD1/6P
R228	0113601	CF 270Ω ±5% SRD1/6P
R229	0113663	CF 100KΩ ±5% SRD1/6P
R230	0113659	CF 68KΩ ±5% SRD1/6P
⚠R231	1123622	NF 120Ω ±5% SRD1/4P
R232	0113293	CF 330Ω ±5% SRD1/2P
R233	0113655	CF 47KΩ ±5% SRD1/6P [for VS, ZS]

SYMBOL No.	PART No.	DESCRIPTION
R234	0113651	CF 33KΩ ±5% SRD1/6P
R235	0113619	CF 1.5KΩ ±5% SRD1/6P [for US, CS]
	0113617	CF 1.2KΩ ±5% SRD1/6P [except US, CS]
R236	0113661	CF 82KΩ ±5% SRD1/6P
R237	0113627	CF 3.3KΩ ±5% SRD1/6P
R301	0113615	CF 1KΩ ±5% SRD1/6P
R302LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R303	0113615	CF 1KΩ ±5% SRD1/6P
R304	0113639	CF 10KΩ ±5% SRD1/6P
R305	0113611	CF 680Ω ±5% SRD1/6P
R307LR	0113663	CF 100KΩ ±5% SRD1/6P
R308	0113615	CF 1KΩ ±5% SRD1/6P
R309	0113623	CF 2.2KΩ ±5% SRD1/6P
R310	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R311	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R312	0113615	CF 1KΩ ±5% SRD1/6P
R313	0113639	CF 10KΩ ±5% SRD1/6P
R314	0113623	CF 2.2KΩ ±5% SRD1/6P
R315	0113611	CF 680Ω ±5% SRD1/6P
R316	0113619	CF 1.5KΩ ±5% SRD1/6P
R317	0113635	CF 6.8KΩ ±5% SRD1/6P
R318	0113615	CF 1KΩ ±5% SRD1/6P [for ES, VS, BK]
R319	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R320	0113635	CF 6.8KΩ ±5% SRD1/6P [for ES, VS, BK]
R321	0113635	CF 6.8KΩ ±5% SRD1/6P [for ES, VS, BK]
R322	0113639	CF 10KΩ ±5% SRD1/6P
R323	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R324	0113639	CF 10KΩ ±5% SRD1/6P [for ES, VS, BK]
R325	0113639	CF 10KΩ ±5% SRD1/6P
R326LR	0113627	CF 3.3KΩ ±5% SRD1/6P [for VS]
R327LR	0113647	CF 22KΩ ±5% SRD1/6P
R328LR	0113619	CF 1.5KΩ ±5% SRD1/6P [except VS]
	0113609	CF 560Ω ±5% SRD1/6P [for VS]
R329LR	0113661	CF 82KΩ ±5% SRD1/6P
R330LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R351	0113639	CF 10KΩ ±5% SRD1/6P
R352	0113639	CF 10KΩ ±5% SRD1/6P
R354	0113647	CF 22KΩ ±5% SRD1/6P
R355	0113615	CF 1KΩ ±5% SRD1/6P
R356	0113603	CF 330Ω ±5% SRD1/6P
R357	0113639	CF 10KΩ ±5% SRD1/6P
R358	0113679	CF 470KΩ ±5% SRD1/6P
R359	0113639	CF 10KΩ ±5% SRD1/6P
R361	0113631	CF 4.7KΩ ±5% SRD1/6P
R362	0113615	CF 1KΩ ±5% SRD1/6P
R363	0113637	CF 8.2KΩ ±5% SRD1/6P
R364	0113615	CF 1KΩ ±5% SRD1/6P
R365	0113615	CF 1KΩ ±5% SRD1/6P
R366	0113631	CF 4.7KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R367	0113615	CF 1KΩ ±5% SRD1/6P
R368	0113615	CF 1KΩ ±5% SRD1/6P
R369	0113615	CF 1KΩ ±5% SRD1/6P
R370	0113615	CF 1KΩ ±5% SRD1/6P
R371	0113639	CF 10KΩ ±5% SRD1/6P
R372	0113615	CF 1KΩ ±5% SRD1/6P
R373	0113615	CF 1KΩ ±5% SRD1/6P
R374	0113615	CF 1KΩ ±5% SRD1/6P
R375	0113615	CF 1KΩ ±5% SRD1/6P
R376	0113615	CF 1KΩ ±5% SRD1/6P
R378	0113631	CF 4.7KΩ ±5% SRD1/6P
R380	0113615	CF 1KΩ ±5% SRD1/6P
R381	0113623	CF 2.2KΩ ±5% SRD1/6P
R383	0113615	CF 1KΩ ±5% SRD1/6P
R384	0113631	CF 4.7KΩ ±5% SRD1/6P
R385	0113631	CF 4.7KΩ ±5% SRD1/6P
R386	0113631	CF 4.7KΩ ±5% SRD1/6P
R387	0113631	CF 4.7KΩ ±5% SRD1/6P
R388	0113631	CF 4.7KΩ ±5% SRD1/6P
R389	0113631	CF 4.7KΩ ±5% SRD1/6P
R390	0113615	CF 1KΩ ±5% SRD1/6P
R401LR	0113663	CF 100KΩ ±5% SRD1/6P
R402LR	0113663	CF 100KΩ ±5% SRD1/6P
R403LR	0113589	CF 82Ω ±5% SRD1/6P
R404LR	0113641	CF 12KΩ ±5% SRD1/6P
R405LR	0113645	CF 18KΩ ±5% SRD1/6P
R406LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R407LR	0113625	CF 2.7KΩ ±5% SRD1/6P
R408LR	0113639	CF 10KΩ ±5% SRD1/6P
R409	0113625	CF 2.7KΩ ±5% SRD1/6P
R410	0113639	CF 10KΩ ±5% SRD1/6P
R411	0113639	CF 10KΩ ±5% SRD1/6P
R412	0113639	CF 10KΩ ±5% SRD1/6P
R413	0113639	CF 10KΩ ±5% SRD1/6P
R414	0113639	CF 10KΩ ±5% SRD1/6P
R415LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R416LR	0113643	CF 15KΩ ±5% SRD1/6P
R417LR	0113639	CF 10KΩ ±5% SRD1/6P
R418LR	0113663	CF 100KΩ ±5% SRD1/6P
R419LR	0113615	CF 1KΩ ±5% SRD1/6P
R420LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R421LR	0113663	CF 100KΩ ±5% SRD1/6P
R422	0113631	CF 4.7KΩ ±5% SRD1/6P
R423LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R424	0113647	CF 22KΩ ±5% SRD1/6P
R425	0113639	CF 10KΩ ±5% SRD1/6P
R426	0113631	CF 4.7KΩ ±5% SRD1/6P
R427LR	0113639	CF 10KΩ ±5% SRD1/6P
R428LR	0113615	CF 1KΩ ±5% SRD1/6P
R429	0113627	CF 3.3KΩ ±5% SRD1/6P
R430	0113633	CF 5.6KΩ ±5% SRD1/6P
R431LR	0113655	CF 47KΩ ±5% SRD1/6P
R432	0113633	CF 5.6KΩ ±5% SRD1/6P
R433	0113551	CF 2.2Ω ±5% SRD1/6P
R434	0113641	CF 12KΩ ±5% SRD1/6P
R435	0113641	CF 12KΩ ±5% SRD1/6P
R437	0113643	CF 15KΩ ±5% SRD1/6P
R438	0113619	CF 1.5KΩ ±5% SRD1/6P
R439	0113627	CF 3.3KΩ ±5% SRD1/6P
R440	0113631	CF 4.7KΩ ±5% SRD1/6P
R441	0113571	CF 15Ω ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R442LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R443LR	0113639	CF 10KΩ ±5% SRD1/6P
R444LR	0113615	CF 1KΩ ±5% SRD1/6P
R445LR	0113575	CF 22Ω ±5% SRD1/6P
R446LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R447LR	0113625	CF 2.7KΩ ±5% SRD1/6P
R448LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R449LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R450	0113589	CF 82Ω ±5% SRD1/6P
R451	0113679	CF 470KΩ ±5% SRD1/6P
R453	0113663	CF 100KΩ ±5% SRD1/6P
R454	0113615	CF 1KΩ ±5% SRD1/6P
R455	0113647	CF 22KΩ ±5% SRD1/6P
R457	0113663	CF 100KΩ ±5% SRD1/6P
R458	0113631	CF 4.7KΩ ±5% SRD1/6P
R459	0113631	CF 4.7KΩ ±5% SRD1/6P
R460	0113631	CF 4.7KΩ ±5% SRD1/6P
R461	0113615	CF 1KΩ ±5% SRD1/6P
R462	0113631	CF 4.7KΩ ±5% SRD1/6P
R463	0113647	CF 22KΩ ±5% SRD1/6P
R464	0113631	CF 4.7KΩ ±5% SRD1/6P
R465	0113631	CF 4.7KΩ ±5% SRD1/6P
R466	0113633	CF 5.6KΩ ±5% SRD1/6P
R467LR	0113651	CF 33KΩ ±5% SRD1/6P
R468	0113591	CF 100Ω ±5% SRD1/6P
R469	0113591	CF 100Ω ±5% SRD1/6P
R470LR	0113671	CF 220KΩ ±5% SRD1/6P
R471LR	0113635	CF 6.8KΩ ±5% SRD1/6P
R472LR	0113649	CF 27KΩ ±5% SRD1/6P
R475	0113663	CF 100KΩ ±5% SRD1/6P
R476LR	0113651	CF 33KΩ ±5% SRD1/6P
R477	0113647	CF 22KΩ ±5% SRD1/6P
R480	0113293	CF 330Ω ±5% SRD1/2P
R481	0113639	CF 10KΩ ±5% SRD1/6P
R482	0113639	CF 10KΩ ±5% SRD1/6P
R483	0113639	CF 10KΩ ±5% SRD1/6P
R484	0113639	CF 10KΩ ±5% SRD1/6P
R485	0113671	CF 220KΩ ±5% SRD1/6P
R486	0113671	CF 220KΩ ±5% SRD1/6P
R501LR	0113609	CF 560Ω ±5% SRD1/6P
R502LR	0113655	CF 47KΩ ±5% SRD1/6P
R503LR	0113617	CF 1.2KΩ ±5% SRD1/6P
R504LR	0113677	CF 390KΩ ±5% SRD1/6P
R505LR	0113651	CF 33KΩ ±5% SRD1/6P
R506LR	0113663	CF 100KΩ ±5% SRD1/6P
R508LR	0113615	CF 1KΩ ±5% SRD1/6P
R509LR	0113673	CF 270KΩ ±5% SRD1/6P
R511LR	0113673	CF 270KΩ ±5% SRD1/6P
R512	0113623	CF 2.2KΩ ±5% SRD1/6P
R513	0113631	CF 4.7KΩ ±5% SRD1/6P
R514	0113296	CF 560Ω ±5% SRD1/2P
R515	0113296	CF 560Ω ±5% SRD1/2P
R553	0113201	CF 10Ω ±5% SRD1/2P
R554LR	0113647	CF 22KΩ ±5% SRD1/6P
R555LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R556	0113619	CF 1.5KΩ ±5% SRD1/6P
R601	0113639	CF 10KΩ ±5% SRD1/6P
R602	0113655	CF 47KΩ ±5% SRD1/6P
R603	0113655	CF 47KΩ ±5% SRD1/6P
R604	0113655	CF 47KΩ ±5% SRD1/6P
R605	0113657	CF 56KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R606	0113657	CF 56KΩ ±5% SRD1/6P
R607	0113639	CF 10KΩ ±5% SRD1/6P
R608	0113639	CF 10KΩ ±5% SRD1/6P
R609	0113647	CF 22KΩ ±5% SRD1/6P
R610	0113663	CF 100KΩ ±5% SRD1/6P
R611	0113647	CF 22KΩ ±5% SRD1/6P
R613	0113601	CF 270Ω ±5% SRD1/6P
R614	0113599	CF 220Ω ±5% SRD1/6P
R615	0113601	CF 270Ω ±5% SRD1/6P
R616	0113601	CF 270Ω ±5% SRD1/6P
R617	0113599	CF 220Ω ±5% SRD1/6P
R618	0113599	CF 220Ω ±5% SRD1/6P
R619	0113601	CF 270Ω ±5% SRD1/6P
R620	0113599	CF 220Ω ±5% SRD1/6P
R621	0113599	CF 220Ω ±5% SRD1/6P
R622	0113639	CF 10KΩ ±5% SRD1/6P
R623	0113647	CF 22KΩ ±5% SRD1/6P
R624	0113601	CF 270Ω ±5% SRD1/6P
R625	0113639	CF 10KΩ ±5% SRD1/6P
R626	0113623	CF 2.2KΩ ±5% SRD1/6P
R627	0113615	CF 1KΩ ±5% SRD1/6P
R629LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R630LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R631LR	0113615	CF 1KΩ ±5% SRD1/6P
R632	0113293	CF 330Ω ±5% SRD1/2P
R633LR	0113629	CF 3.9KΩ ±5% SRD1/6P
R634LR	0113661	CF 82KΩ ±5% SRD1/6P
R636	0113639	CF 10KΩ ±5% SRD1/6P
R637	0113655	CF 47KΩ ±5% SRD1/6P
R638	0113655	CF 47KΩ ±5% SRD1/6P
R639	0113655	CF 47KΩ ±5% SRD1/6P
R640	0113635	CF 6.8KΩ ±5% SRD1/6P
R641	0113635	CF 6.8KΩ ±5% SRD1/6P
R642	0113657	CF 56KΩ ±5% SRD1/6P
R643	0113657	CF 56KΩ ±5% SRD1/6P
R644	0113657	CF 56KΩ ±5% SRD1/6P
R645	0113657	CF 56KΩ ±5% SRD1/6P
R646	0113657	CF 56KΩ ±5% SRD1/6P
R648	0129519	CF 5.6Ω ±5% SRD1/4P
R649	0129519	CF 5.6Ω ±5% SRD1/4P
R651LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R652LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R653LR	0113687	CF 1MΩ ±5% SRD1/6P
R654LR	0113645	CF 18KΩ ±5% SRD1/6P
R655LR	0113639	CF 10KΩ ±5% SRD1/6P
R657LR	0113615	CF 1KΩ ±5% SRD1/6P
R658LR	0113611	CF 680Ω ±5% SRD1/6P
R661	0113639	CF 10KΩ ±5% SRD1/6P
R663	0113627	CF 3.3KΩ ±5% SRD1/6P
R664	0129601	CF 1KΩ ±5% SRD1/4P
R665LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R666LR	0113611	CF 680Ω ±5% SRD1/6P
R701LR	0113615	CF 1KΩ ±5% SRD1/6P
R702LR	0113657	CF 56KΩ ±5% SRD1/6P
R703LR	0113595	CF 150Ω ±5% SRD1/6P
R704LR	0113657	CF 56KΩ ±5% SRD1/6P
R705LR	0113370	CF 2.7KΩ ±5% SRD1/2P
R706LR	0113370	CF 2.7KΩ ±5% SRD1/2P
⚠R707	1110621	FR 100Ω ±5% RN1/4B
R708	0113365	CF 1KΩ ±5% SRD1/2P
R709	0113362	CF 2.2KΩ ±5% SRD1/2P

SYMBOL No.	PART No.	DESCRIPTION
⚠R710	1110621	FR 100Ω ±5% RN1/4B
R711LR	1119029	ME 4.7Ω ±10% RN1B
R712	0113671	CF 220KΩ ±5% SRD1/6P
R713	0113655	CF 47KΩ ±5% SRD1/6P
R714	0113631	CF 4.7KΩ ±5% SRD1/6P
R715	0113663	CF 100KΩ ±5% SRD1/6P
R716	0113649	CF 27KΩ ±5% SRD1/6P
R717	0113641	CF 12KΩ ±5% SRD1/6P
R718	0113657	CF 56KΩ ±5% SRD1/6P
R719	0113367	CF 1.2KΩ ±5% SRD1/2P
R720	0113295	CF 470Ω ±5% SRD1/2P
R721LR	0113663	CF 100KΩ ±5% SRD1/6P
R722LR	0129531	CF 10Ω ±5% SRD1/4P
R730LR	1119123	ME 0.22Ω ±10% RN2B
R731LR	0113625	CF 2.7KΩ ±5% SRD1/6P
R732LR	0113631	CF 4.7KΩ ±5% SRD1/6P
R733	0113633	CF 5.6KΩ ±5% SRD1/6P
R734	0113362	CF 2.2KΩ ±5% SRD1/2P
R735	0113367	CF 1.2KΩ ±5% SRD1/2P
R751LR	0113643	CF 15KΩ ±5% SRD1/6P
R752LR	0113653	CF 39KΩ ±5% SRD1/6P
R753LR	0113599	CF 220Ω ±5% SRD1/6P
R754LR	0113653	CF 39KΩ ±5% SRD1/6P
R755LR	0113663	CF 100KΩ ±5% SRD1/6P
R756LR	0113287	CF 100Ω ±5% SRD1/2P
R758	0113673	CF 270KΩ ±5% SRD1/6P
R759	0113663	CF 100KΩ ±5% SRD1/6P
R760	0113639	CF 10KΩ ±5% SRD1/6P
R761	0113615	CF 1KΩ ±5% SRD1/6P
R801	0113645	CF 18KΩ ±5% SRD1/6P
R802	0113295	CF 470Ω ±5% SRD1/2P
R803	0113295	CF 470Ω ±5% SRD1/2P
R804	0113639	CF 10KΩ ±5% SRD1/6P
R805	0129601	CF 1KΩ ±5% SRD1/4P
R806	0113296	CF 560Ω ±5% SRD1/2P
R807	0113639	CF 10KΩ ±5% SRD1/6P
R808	0113655	CF 47KΩ ±5% SRD1/6P
R809	1119430	MO 560Ω ±10% RS1B
R810	0113295	CF 470Ω ±5% SRD1/2P
R812	0113365	CF 1KΩ ±5% SRD1/2P
⚠R813	1110609	FR 47Ω ±5% RN1/4B
⚠R814	1110609	FR 47Ω ±5% RN1/4B
R815	0113639	CF 10KΩ ±5% SRD1/6P
R816	1119430	MO 560Ω ±10% RS1B
R817	0129615	CF 3.9KΩ ±5% SRD1/4P
R818	0113623	CF 2.2KΩ ±5% SRD1/6P
R819	0113655	CF 47KΩ ±5% SRD1/6P
R820	0113639	CF 10KΩ ±5% SRD1/6P
R821	0113647	CF 22KΩ ±5% SRD1/6P
R822	0113647	CF 22KΩ ±5% SRD1/6P
R823	0113639	CF 10KΩ ±5% SRD1/6P
R831	0113623	CF 2.2KΩ ±5% SRD1/6P
R832	0113615	CF 1KΩ ±5% SRD1/6P
R833	0113627	CF 3.3KΩ ±5% SRD1/6P
R834	0113223	CF 33Ω ±5% SRD1/2P
R835	0113222	CF 27Ω ±5% SRD1/2P
R836	1119155	MF 22Ω ±10% RN2B
R837	0113679	CF 470KΩ ±5% SRD1/6P
R838	0113365	CF 1KΩ ±5% SRD1/2P
R850	0113687	CF 1MΩ ±5% SRD1/6P
R851	0113639	CF 10KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R852	0113639	CF 10KΩ ±5% SRD1/6P
R853	0129573	CF 330Ω ±5% SRD1/4P
R854	0113639	CF 10KΩ ±5% SRD1/6P
R855	0113639	CF 10KΩ ±5% SRD1/6P
R856	0113639	CF 10KΩ ±5% SRD1/6P
R857	0113639	CF 10KΩ ±5% SRD1/6P
R858	0129573	CF 330Ω ±5% SRD1/4P
R859	0113691	CF 1.5MΩ ±5% SRD1/6P
R860	0113221	CF 22Ω ±5% SRD1/2P
R861	0113221	CF 22Ω ±5% SRD1/2P
R863	0113221	CF 22Ω ±5% SRD1/2P
R864	0113221	CF 22Ω ±5% SRD1/2P
R865	0113639	CF 10KΩ ±5% SRD1/6P
R866LR	0113629	CF 3.9KΩ ±5% SRD1/6P
R867LR	0113629	CF 3.9KΩ ±5% SRD1/6P
R868LR	0113591	CF 100Ω ±5% SRD1/6P
R869LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R870	0113663	CF 100KΩ ±5% SRD1/6P
R871	0113619	CF 1.5KΩ ±5% SRD1/6P
R872	0113619	CF 1.5KΩ ±5% SRD1/6P
R873	0113663	CF 100KΩ ±5% SRD1/6P
R874	0113663	CF 100KΩ ±5% SRD1/6P
R875	0113619	CF 1.5KΩ ±5% SRD1/6P
R876	0113613	CF 820Ω ±5% SRD1/6P
R877	0113639	CF 10KΩ ±5% SRD1/6P
R878	0113633	CF 5.6KΩ ±5% SRD1/6P
R879	0113615	CF 1KΩ ±5% SRD1/6P
R881	0113671	CF 220KΩ ±5% SRD1/6P
R882	0113653	CF 39KΩ ±5% SRD1/6P
R883	0113647	CF 22KΩ ±5% SRD1/6P
R884	0113603	CF 330Ω ±5% SRD1/6P
R887	0113615	CF 1KΩ ±5% SRD1/6P
R888	0113639	CF 10KΩ ±5% SRD1/6P
R889	0113639	CF 10KΩ ±5% SRD1/6P
R890	0113639	CF 10KΩ ±5% SRD1/6P
R891	0113613	CF 820Ω ±5% SRD1/6P
R892	0113639	CF 10KΩ ±5% SRD1/6P
R893	0113595	CF 150Ω ±5% SRD1/6P
R894	0113567	CF 10Ω ±5% SRD1/6P
R895	0113623	CF 2.2KΩ ±5% SRD1/6P
R896	0113639	CF 10KΩ ±5% SRD1/6P
R897	0113615	CF 1KΩ ±5% SRD1/6P
R898	0113595	CF 150Ω ±5% SRD1/6P
R899	0113567	CF 10Ω ±5% SRD1/6P
R900	0113643	CF 15KΩ ±5% SRD1/6P
R901	0113615	CF 1KΩ ±5% SRD1/6P
R902	0113222	CF 27Ω ±5% SRD1/2P
R903	0113645	CF 18KΩ ±5% SRD1/6P
R904	0113631	CF 4.7KΩ ±5% SRD1/6P
R905	0113599	CF 220Ω ±5% SRD1/6P
R906	0113665	CF 120KΩ ±5% SRD1/6P
R907	0113591	CF 100Ω ±5% SRD1/6P
R908	0113591	CF 100Ω ±5% SRD1/6P
R909	0113665	CF 120KΩ ±5% SRD1/6P
R910	0113655	CF 47KΩ ±5% SRD1/6P
R911	0113651	CF 33KΩ ±5% SRD1/6P
R912	0113665	CF 120KΩ ±5% SRD1/6P
R913	0113615	CF 1KΩ ±5% SRD1/6P
R914	0113591	CF 100Ω ±5% SRD1/6P
R915	0113687	CF 1MΩ ±5% SRD1/6P
R916	0113639	CF 10KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R917	0113623	CF 2.2KΩ ±5% SRD1/6P
R918	0113613	CF 820Ω ±5% SRD1/6P
R919	0113615	CF 1KΩ ±5% SRD1/6P
R920	0113639	CF 10KΩ ±5% SRD1/6P
R921	0113639	CF 10KΩ ±5% SRD1/6P
R922	0133601	CF 270Ω ±5% SRD1/6P
R923	0133601	CF 270Ω ±5% SRD1/6P
R924	0113619	CF 1.5KΩ ±5% SRD1/6P
R925	0113609	CF 560Ω ±5% SRD1/6P
R926	0113623	CF 2.2KΩ ±5% SRD1/6P
R927	0113655	CF 47KΩ ±5% SRD1/6P
R931	0113623	CF 2.2KΩ ±5% SRD1/6P
R932	0113627	CF 3.3KΩ ±5% SRD1/6P
R933	0113687	CF 1MΩ ±5% SRD1/6P
R934	0113647	CF 22KΩ ±5% SRD1/6P
R935	0113649	CF 27KΩ ±5% SRD1/6P
R936	0113655	CF 47KΩ ±5% SRD1/6P
R937	0113639	CF 10KΩ ±5% SRD1/6P
R938	0113639	CF 10KΩ ±5% SRD1/6P
R939	0113627	CF 3.3KΩ ±5% SRD1/6P
R940	0113627	CF 3.3KΩ ±5% SRD1/6P
R941	0113641	CF 12KΩ ±5% SRD1/6P
R942	0113639	CF 10KΩ ±5% SRD1/6P
R943	0113663	CF 100KΩ ±5% SRD1/6P
R944	0113583	CF 47Ω ±5% SRD1/6P
R945	0113613	CF 820Ω ±5% SRD1/6P
R946	0113643	CF 15KΩ ±5% SRD1/6P
R947	0113643	CF 15KΩ ±5% SRD1/6P
R948	0113655	CF 47KΩ ±5% SRD1/6P
R949	0113655	CF 47KΩ ±5% SRD1/6P
R950	0113645	CF 18KΩ ±5% SRD1/6P
R951	0113671	CF 220KΩ ±5% SRD1/6P
R952	0113599	CF 220Ω ±5% SRD1/6P
R953	0113591	CF 100Ω ±5% SRD1/6P
R954	0113671	CF 220KΩ ±5% SRD1/6P
R955	0113671	CF 220KΩ ±5% SRD1/6P
R961	0113687	CF 1MΩ ±5% SRD1/6P
R962	0113639	CF 10KΩ ±5% SRD1/6P
R963	0113663	CF 100KΩ ±5% SRD1/6P
R964	0113639	CF 10KΩ ±5% SRD1/6P
R965	0113655	CF 47KΩ ±5% SRD1/6P
R966	0113639	CF 10KΩ ±5% SRD1/6P
R967	0113615	CF 1KΩ ±5% SRD1/6P
R968	0113607	CF 470Ω ±5% SRD1/6P
R969	0113627	CF 3.3KΩ ±5% SRD1/6P
R970	0113647	CF 22KΩ ±5% SRD1/6P
R971	0113687	CF 1MΩ ±5% SRD1/6P
R972	0113639	CF 10KΩ ±5% SRD1/6P
R973	0113639	CF 10KΩ ±5% SRD1/6P
R974	0113615	CF 1KΩ ±5% SRD1/6P
R975	0113607	CF 470Ω ±5% SRD1/6P
R976	0113615	CF 1KΩ ±5% SRD1/6P
R977	0113663	CF 100KΩ ±5% SRD1/6P
R978	0113663	CF 100KΩ ±5% SRD1/6P
R980	0113629	CF 3.9KΩ ±5% SRD1/6P
R981	0113629	CF 3.9KΩ ±5% SRD1/6P
R982	0113629	CF 3.9KΩ ±5% SRD1/6P
R983	0113629	CF 3.9KΩ ±5% SRD1/6P
R986	0113663	CF 100KΩ ±5% SRD1/6P
R987	0113663	CF 100KΩ ±5% SRD1/6P
R988	0113615	CF 1KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R989	0113615	CF 1KΩ ±5% SRD1/6P
R990	0113615	CF 1KΩ ±5% SRD1/6P
R991	0113615	CF 1KΩ ±5% SRD1/6P
R992	0113655	CF 47KΩ ±5% SRD1/6P
R993	0113655	CF 47KΩ ±5% SRD1/6P
R994	0113655	CF 47KΩ ±5% SRD1/6P
R995	0113655	CF 47KΩ ±5% SRD1/6P
R996	0113655	CF 47KΩ ±5% SRD1/6P
R997	0113659	CF 68KΩ ±5% SRD1/6P
R999	0113663	CF 100KΩ ±5% SRD1/6P
		ICs & TRANSISTORS
IC201	2368431	AN278
IC202	2301121	LA1266
IC301	2300631	BA1332L
IC302	2301681	LC7217
IC351	2301613	HD63A01Y0C60P
IC352	2368791	TC4028BP
IC401	2301731	LA3246
IC402	2301711	μPC1290C
IC403	2387301	M5218P
IC404	2301201	HA12086
IC405	2301741	LA3240
IC501	2387301	M5218P
IC502	2301691	LC7821
IC551	2301701	BA6209N
IC601	2300658	μPD7516HCW-287
IC602	2387241	IR3702
IC603	2369411	MSM58371
IC604LR	2300841	BA3812L
IC605	2387241	IR3702
IC651	2301291	μPC4570C
IC701	2301151	STK4192 II
IC702	2387581	μPC1237H
IC751	2387301	M5218P
IC851	2300971	HA12096
IC852LR	2301291	μPC4570C
IC853LR	2387481	HD14053B
IC901	2300681	BA6352S
IC902	2367222	NJM4558DM
IC903	2377673	TM5060
IC904	2367222	NJM4558DM
IC905	2301212	HD49201A
IC906	2387441	HM6116FP-4
IC907	2301443	μPD7516HCW-317
IC908	2301062	HD614042SF54
IR601	2377731	GP1U501
Q101	2318303	2SC1740S(S) [for ZS]
Q102	2328802	2SK104(F) [for ZS]
Q151	2318222	DTC124EST [for ES, VS, BK]
Q152	2318222	DTC124EST [for ES, VS, BK]
Q202	2318292	2SA933S(R)
Q203	2318222	DTC124EST
Q204	2318303	2SC1740S(S)
Q205	2318303	2SC1740S(S)
Q206	2318303	2SC1740S(S)
Q301	2318292	2SA933S(R)

SYMBOL No.	PART No.	DESCRIPTION
Q302	2318292	2SA933S(R) [for ES, VS, BK]
Q303	2318292	2SA933S(R) [for ES, VS, BK]
Q304	2318292	2SA933S(R)
Q305	2318303	2SC1740S(S)
Q306	2318303	2SC1740S(S)
Q307	2318303	2SC1740S(S) [for ES, VS, BK]
Q308	2318303	2SC1740S(S) [for ES, VS, BK]
Q309LR	2318303	2SC1740S(S)
Q401	2318222	DTC124EST
Q402	2318222	DTC124EST
Q403	2318222	DTC124EST
Q404	2318222	DTC124EST
Q405	2318222	DTC124EST
Q406LR	2329316	2SC1741QR
Q407LR	2318222	DTC124EST
Q408	2318222	DTC124EST
Q409LR	2329316	2SC1741QR
Q410	2318222	DTC124EST
Q411LR	2329316	2SC1741QR
Q412	2327333	2SC1213P(C)
Q413	2327333	2SC1213P(C)
Q414	2318282	2SD468CTZ
Q415	2318222	DTC124EST
Q416	2318303	2SC1740S(S)
Q417	2318222	DTC124EST
Q418LR	2318222	DTC124EST
Q419	2318222	DTC124EST
Q420LR	2329316	2SC1741QR
Q421	2317741	2SD1111
Q422	2317741	2SD1111
Q423	2317741	2SD1111
Q424	2329582	2SA933T(R)
Q425	2318222	DTC124EST
Q426	2318222	DTC124EST
Q427	2318222	DTC124EST
Q428	2317741	2SD1111
Q429	2317741	2SD1111
Q430	2317741	2SD1111
Q431	2329582	2SA933T(R)
Q432	2318303	2SC1740S(S)
Q433	2318303	2SC1740S(S)
Q434	2318303	2SC1740S(S)
Q501LR	2317971	2SD1468(R)
Q601	2318292	2SA933S(R)
Q602	2318292	2SA933S(R)
Q603	2318303	2SC1740S(S)
Q604	2318303	2SC1740S(S)
Q605	2318292	2SA933S(R)
Q606	2318292	2SA933S(R)
Q651LR	2318303	2SC1740S(S)
Q652LR	2317971	2SD1468(R)
Q654	2318292	2SA933S(R)
Q701	2318292	2SA933S(R)
Q730LR	2327893	2SA872E
Q751	2318292	2SA933S(R)
Q752	2328652	2SC1740LN(S)
Q801	2318374	2SD1913(Q/R)
Q802	2318364	2SB1274(Q/R)

SYMBOL No.	PART No.	DESCRIPTION
Q803	2318303	2SC1740S(S)
Q804	2318374	2SD1913(Q/R)
Q805	2318271	2SB562BTZ
Q806	2318364	2SB1274(Q/R)
Q807	2318374	2SD1913(Q/R)
Q808	2318303	2SC1740S(S)
Q809	2318303	2SC1740S(S)
Q810	2318303	2SC1740S(S)
Q811	2318292	2SA933S(R)
Q812	2318303	2SC1740S(S)
Q813	2318303	2SC1740S(S)
Q851	2318372	2SD1913(R)
Q853	2318374	2SD1913(Q/R)
Q854	2318362	2SB1274(R)
Q856	2318364	2SB1274(Q/R)
Q871	2318292	2SA933S(R)
Q872	2328652	2SC1740LN(S)
Q873	2318292	2SA933S(R)
Q881	2328652	2SC1740LN(S)
Q890	2318292	2SA933S(R)
Q891	2328652	2SC1740LN(S)
Q892	2328652	2SC1740LN(S)
Q893	2318292	2SA933S(R)
Q901	2318271	2SB562BTZ
Q902	2328652	2SC1740LN(S)
Q903	2328652	2SC1740LN(S)
Q904	2318292	2SA933S(R)
Q905	2328652	2SC1740LN(S)
Q906	2328652	2SC1740LN(S)
Q907	2318374	2SD1913(Q/R)
Q908	2318364	2SB1274(Q/R)
Q909	2328652	2SC1740LN(S)
Q910	2328652	2SC1740LN(S)
		DIODES
D101	2398611	1SS254
D102	2398611	1SS254
D103	2337931	1K60R [for ZS]
D104	2337931	1K60R [for ZS]
D105	2398611	1SS254 [for ES, VS, BK]
D106	2398611	1SS254 [for ES, VS, BK]
D151	2398611	1SS254
D152	2398611	1SS254
D153	2397321	KV1260
D154	2397321	KV1260 [for ES, VS, BK]
D155	2398611	1SS254 [for ES, VS, BK]
D156	2398611	1SS254 [for ES, VS, BK]
D157	2398611	1SS254 [for ES, VS, BK]
D301	2398611	1SS254
D302	2398611	1SS254
D303	2337762	ERB12-01
D351	2337762	ERB12-01
D354	2398611	1SS254

SYMBOL No.	PART No.	DESCRIPTION
D355	2398611	1SS254
D365	2398611	1SS254 [for US, CS]
D366	2398611	1SS254 [except US, CS]
D367	2398611	1SS254 [for ES, VS, BK]
D368	2398611	1SS254
D369	2398611	1SS254
D401	2398611	1SS254
D402	2398611	1SS254
D403	2398611	1SS254
D405	2398611	1SS254
D406	2398611	1SS254
D407	2398611	1SS254
D408	2398611	1SS254
D409	2398611	1SS254
D410	2398611	1SS254
D411	2398611	1SS254
D412	2398611	1SS254
D413	2398611	1SS254
D414	2398611	1SS254
D415	2398611	1SS254
D416	2398611	1SS254
D418	2398611	1SS254
D419	2398611	1SS254
D420	2398611	1SS254
D421	2398611	1SS254
D422	2398611	1SS254
D423	2398611	1SS254
D424	2398611	1SS254
D425	2398611	1SS254
D426	2398611	1SS254
D429	2398611	1SS254
D430	2398611	1SS254
D501	2398611	1SS254
D601	2337762	ERB12-01
D603	2398611	1SS254
D604	2398611	1SS254
D605	2398611	1SS254
D606	2398611	1SS254
D607	2398611	1SS254
D608	2398611	1SS254
D611	2398611	1SS254
D612	2398611	1SS254
D619	2398611	1SS254
D629	2398611	1SS254
D630	2398611	1SS254
D631	2398611	1SS254
D632	2398611	1SS254
D633	2398611	1SS254
D634	2398611	1SS254
D635	2398611	1SS254
D636	2398611	1SS254
D637	2398611	1SS254
D638	2398611	1SS254
D639	2398611	1SS254
D652	2398611	1SS254
D701	2398611	1SS254
D702	2398611	1SS254
D703	2398611	1SS254

SYMBOL No.	PART No.	DESCRIPTION
D730LR	2398611	1SS254
D801	2337461	S4VB20
D802	2337762	ERB12-01
D803	2337461	S4VB20
D804	2337762	ERB12-01
D805	2337762	ERB12-01
D806	2337762	ERB12-01
D807	2398611	1SS254
D808	2398611	1SS254
D881	2398611	1SS254
D901	2398611	1SS254
D902	2398611	1SS254
D903	2398611	1SS254
D904	2398611	1SS254
D905	2398611	1SS254
D906	2398611	1SS254
D907	2398611	1SS254
D908	2398611	1SS254
D909	2398611	1SS254
D910	2398611	1SS254
D912	2398611	1SS254
D913	2398611	1SS254
D915	2398611	1SS254
D916	2398611	1SS254
D917	2398611	1SS254
D918	2398611	1SS254
ZD402	2337563	HZ-12A-3
ZD403	2337624	HZ-4B-1
ZD501	2337524	HZ9B1
ZD502	2337524	HZ9B1
ZD551	2337629	HZ-4C-3
ZD601	2337527	HZ9C1
ZD602	2337622	HZ-4A-2
ZD651	2337514	HZ-6B-1
ZD801	2337563	HZ-12A-3
ZD802	2327731	HZ7A
ZD803	2337563	HZ-12A-3
ZD804	2337563	HZ-12A-3
ZD806	2337563	HZ-12A-3
ZD807	2338362	HZ5B
ZD808	2338654	RD27EB4
ZD810	2337514	HZ-6B-1
ZD811	2337625	HZ-4B2
ZD812	2337583	HZ-5A-3
ZD813	2337625	HZ-4B2
ZD814	2337583	HZ-5A-3
ZD851	2337514	HZ-6B-1
ZD852	2337514	HZ-6B-1
ZD871	2337569	HZ12C3
ZD872	2337569	HZ12C3
ZD900	2337551	HZ-11A-1
ZD901	2337551	HZ-11A-1
ZD902	2337122	HZ-6B
ZD903	2337612	HZ-3A2
ZD904	2337612	HZ-3A2
ZD905	2337527	HZ9C1
ZD906	2337122	HZ-6B
D602	2338502	SLR54URC1
D620	2338891	SLP-151B
D621	2398722	LN222GPH
D622	2398721	LN222RPH

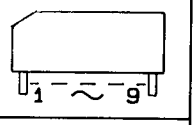
SYMBOL No.	PART No.	DESCRIPTION
D623	2398721	LN222RPH
D624	2398722	LN222GPH
D625	2398722	LN222GPH
D626	2398723	LN422YPH
D627	2398722	LN222GPH
D628	2398722	LN222GPH
VARIABLE RESISTORS		
RT301	0158977	4.7kΩ-(B) (FM MPX VCO ADJ.)
RT401LR	0158971	10kΩ-(B) (PLAYBACK GAIN ADJ.)
RT402LR	0158973	100kΩ-(B) (BIAS CURRENT ADJ.)
RT403LR	0158971	10kΩ-(B) (REC/PLAY OUTPUT LEVEL ADJ.)
RT404	0158971	10kΩ-(B) (HIGH SPEED ADJ.)
RT405	0158971	10kΩ-(B) (NORMAL SPEED ADJ.)
RT406	0158971	10kΩ-(B) (HIGH SPEED ADJ.)
RT407	0158971	10kΩ-(B) (NORMAL SPEED ADJ.)
VR901	0158977	4.7KΩ-(B) (LASER DIOED OUTPUT ADJ.)
VR902	0158971	10KΩ-(B) (TRACKING SERVO OFFSET ADJ.)
RV551	0189114	100kΩ-(B) (with motor) (VOLUME CONTROL)
RV606	0189263	200kΩ-(Special W) (BALANCE CONTROL)
RV607	0189275	100kΩ-(B) (G.E. CONTROL)
RV608	0189275	100kΩ-(B) (G.E. CONTROL)
RV609	0189275	100kΩ-(B) (G.E. CONTROL)
RV610	0189275	100kΩ-(B) (G.E. CONTROL)
RV611	0189275	100kΩ-(B) (G.E. CONTROL)
COILS & TRANSFORMERS		
L101	2227351	Choke coil [except ZS]
L151	2137373	AM ANT coil (MW)
L152	2136493	AM OSC coil (MW)
L153	2137374	AM ANT coil (LW) [for ES, VS, BK]
L154	2136494	AM OSC coil (LW) [for ES, VS, BK]
L301	2228191	Choke coil
L401	2137342	Bias OSC coil
L402LR	2227991	Choke coil
L403LR	2227395	Choke coil
L410	2227394	Choke coil
L601	2227354	Choke coil
L602	2228191	Choke coil
L701LR	2227361	Audio trap coil
L891	2228191	Choke coil
L901	2227931	Choke coil
L902	2227919	Choke coil
L903	2227914	Choke coil
T201	2137033	FM discriminator coil
T202	2154493	AM IF transformer

SYMBOL No.	PART No.	DESCRIPTION
		MISCELLANEOUS
J102	2677911	FM antenna socket [for ES, VS, BK, KS, SA]
	2658391	DIN antenna socket [for ZS]
J151	2689382	4P terminal
J501	2678347	6P US pin jack
J701	2677593	Headphones jack
J702	2689381	Speaker terminal
P101	2712141	Coaxial cord [for ZS]
P101	2712144	Coaxial cord [for ES, VS, BK, KS, SA]
CP101	2136941	Band pass filter [for VS, ZS]
CP201	2136312	Anti birdie filter [for VS, ZS]
CP301LR	2136311	Low pass filter [for VS]
CP401LR	2228104	Dolby filter
CP402LR	2136792	Bias trap coil
CP601	0241912	Capacitor array 220PF x 8
CP602	0241911	Capacitor array 220PF x 12
CP603	0189063	Resistor array 47kΩ x 8
CP651LR	2137171	Low pass filter
CP901	0241912	Capacitor array 220PF x 8
RP351	0189064	Resistor array 4.7kΩ x 5
RP352	0189042	Resistor array 100kΩ x 8
RP353	0189064	Resistor array 4.7kΩ x 5
RY701	2647711	DH relay
MD101	2425671	Tuner pack [except ZS]
MD101	02425731	Tuner pack [for ZS]
FL601	2780391	Fluorescent display tube
FL602	2780401	Fluorescent display tube
FL603	2780121	Fluorescent display tube
MF201	2134982	Ceramic filter [for US, CS]
	2135002	Ceramic filter [except US, CS]
MF202	2134982	Ceramic filter [for US, CS]
	2135002	Ceramic filter [except US, CS]
MF203	2135002	Ceramic filter [for ZS]
MF204	2155421	AM ceramic filter
X301	2780381	Crystal oscillator
X351	2155323	Ceramic oscillator
X601	2155323	Ceramic oscillator
X901	2789832	Crystal oscillator
X902	2155321	Ceramic oscillator
X903	2155324	Ceramic oscillator
⚠F801	2727962	Fuse 3A-125V [for US, CS]
⚠F801	2727194	Fuse T1.6A [for ES, VS, KS, ZS, SA, EW]
⚠F801	2727744	Fuse T1.6A [for BK]
⚠F802	2727745	Fuse T2A [for BK]
⚠F802	2727893	Fuse 2A-125V [for US, CS]
⚠F802	2727193	Fuse T2A [except BK, US, CS]
⚠F803	2727193	Fuse T2A [except BK, US, CS]
⚠F803	2727745	Fuse T2A [for BK]
⚠F803	2727893	Fuse 2A-125V [for US, CS]
⚠LA801	2767664	Lamp (with lead wire, 12V 50mA)
⚠LA802	2767663	Lamp (with lead wire, 12V 50mA)
⚠LA803	2767665	Lamp (with lead wire, 12V 50mA)
S1	2639151	Lever switch (OPEN/CLOSE)
S2	2639151	Lever switch (LASER)
S401	2600423	Push switch (DOLBY NR/MODE SELECT)
S501	2627931	Slide switch (SPACING) [for EW]
S601	2639682	Tact switch (1)
S602	2639682	Tact switch (2)
S603	2639682	Tact switch (3)
S604	2639682	Tact switch (4)
S605	2639682	Tact switch (5)
S606	2639682	Tact switch (6)
S607	2639682	Tact switch (7)
S608	2639682	Tact switch (8)
S609	2639682	Tact switch (9)
S610	2639682	Tact switch (10)
S611	2639682	Tact switch (+10)
S612	2639682	Tact switch (BAND SELECT)
S613	2639682	Tact switch (FM MODE SELECT)
S614	2639682	Tact switch (LONG PLAY)
S615	2639682	Tact switch (PHONO)
S616	2639682	Tact switch (TUNER)
S617	2639682	Tact switch (CD)
S618	2639682	Tact switch (AUX)
S619	2639682	Tact switch (TAPE)
S620	2639682	Tact switch (MEMORY)
S621	2639682	Tact switch (TUNING UP)
S622	2639682	Tact switch (TUNING DOWN)
S623	2639682	Tact switch (MUTE)
S624	2639682	Tact switch (PAUSE.2)
S625	2639682	Tact switch (STOP.2)
S626	2639682	Tact switch (F.PLAY.2)
S627	2639682	Tact switch (R.PLAY.2)
S628	2639682	Tact switch (FF.2)
S629	2639682	Tact switch (REW.2)
S630	2639682	Tact switch (STOP.1)
S631	2639682	Tact switch (F.PLAY.1)
S632	2639682	Tact switch (R.PLAY.1)
S633	2639682	Tact switch (FF.1)
S634	2639682	Tact switch (REW.1)
S635	2639682	Tact switch (REC.2)
S636	2639682	Tact switch (HIGH SPEED DUBBING)
⚠S701	2780271	Thermal switch
⚠S801	2618053	Voltage select switch [for EW]
S901	2639682	Tact switch (SB)
S902	2639682	Tact switch (SF)
S903	2639682	Tact switch (FB)
S904	2639682	Tact switch (FF)
S905	2639682	Tact switch (STOP/CLEAR)
S906	2639682	Tact switch (PLAY)
S907	2639682	Tact switch (PAUSE)
S908	2639682	Tact switch (REPEAT)
⚠S909	2639682	Tact switch (OPERATE)
	3960402	LED holder (A)

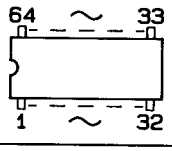
SYMBOL No.	PART No.	DESCRIPTION
		CABINET CHASSIS
1	8691410	BT bind head screw (3 ϕ x 10) (bottom case, main P.W.B., others)
2	8691425	BT bind head screw (3 ϕ x 25) (bottom case)
3	4044641	Upper case assy (BLACK)
	4044451	Upper case assy (WHITE)
4	3392128	CD door open spring (R)
5	3392127	CD door open spring (L)
6	3392129	Cassette door open spring (L)
7	3392120	Cassette door open spring (R)
8	3807092	Control panel [WHITE] [BLACK (except BK)]
	3807093	Control panel [BLACK (for BK)]
9	3807191	Side panel
10	3805331	Clamper
11	3807262	CD lamp cover
12	3908591	Damper
13	3807131	Cassette door assy
14	3807141	CD door assy
15	4044491	Bottom case assy (WHITE) [for ES]
	4044492	Bottom case assy (WHITE) [for VS]
	4044493	Bottom case assy (WHITE) [for BK]
	4044494	Bottom case assy (WHITE) [for KS]
	4044495	Bottom case assy (WHITE) [for ZS]
	4044496	Bottom case assy (WHITE) [for SA]
	4044497	Bottom case assy (WHITE) [for US]
	4044498	Bottom case assy (WHITE) [for CS]
	4044499	Bottom case assy (WHITE) [for EW]
	4044471	Bottom case assy (BLACK) [for ES]
	4044472	Bottom case assy (BLACK) [for VS]
	4044473	Bottom case assy (BLACK) [for BK]
	4044474	Bottom case assy (BLACK) [for KS]
	4044475	Bottom case assy (BLACK) [for ZS]
	4044476	Bottom case assy (BLACK) [for SA]
	4044477	Bottom case assy (BLACK) [for US]
	4044478	Bottom case assy (BLACK) [for CS]
	4044479	Bottom case assy (BLACK) [for EW]
16	3308946	CD control button (WHITE) [for US, CS]
	3308944	CD control button (BLACK) [for US, CS]
	3308947	CD control button (WHITE) [except US, CS]
	3308945	CD control button (BLACK) [except US, CS]
17	3308937	Cassette control button (WHITE)
	3308934	Cassette control button (BLACK)
18	3308911	Tuner button
19	3392153	CD open wire
20	3392143	Cassette open wire
21	3308901	Push button
22	3308921	Volume knob
23	4567422	DT bind head screw (4 ϕ x 8) (power transformer)
24	8699410	BT bind head screw (3 ϕ x 10) (cassette chassis)
25	4594961	Frote screw (unit mecha.)
26	4567432	DT bind head screw (3 ϕ x 8) (voltage select switch) [for EW]
27	8699308	BT bind head screw (2.6 ϕ x 8) (DIN antenna socket) [for ZS]
28	2589341	HTY-3600DH cassette mecha assy (TAPE 2)
29	2789693	Counter
30	4686999	Counter belt
31	2589342	HTY-3300DH cassette mecha assy (TAPE 1)
32	8699414	BT bind head screw (3 ϕ x 14)
⚠33	2267392	Power transformer (2.4 kg 119.4 VA) [for ES, VS, KS, ZS]
⚠	2267393	Power transformer (2.4 kg 119.4 VA) [for BK, SA]
⚠	2267391	Power transformer (2.4 kg 119.4 VA) [for US, CS]
⚠	2267394	Power transformer (2.4 kg 119.4 VA) [for EW]
⚠34	2712101	Power supply cord [for ES, VS, KS, ZS]
⚠	2749582	Power supply cord [for BK]
⚠	2749622	Power supply cord [for SA]
⚠	2712311	Power supply cord [for US, CS]
⚠	2718113	Power supply cord [for EW]
⚠35	3913006	Bushing [except EW]
⚠	0043793	Bushing [for EW]
36	4042682	Unit mecha assy (CD-M12)
37	4691991	Rubber
38	8671406	DT bind head screw (3 ϕ x 6)
39	4567411	DT bind screw (3 ϕ x 6) (heat sink bracket)
40	8691414	BT bind head screw (3 ϕ x 14) (Q801, Q804, Q806)
41	8691408	BT bind head screw (3 ϕ x 8) (shield sheet)
42	4573553	Bind tapping screw (3 ϕ x 25) (IC701)
43	3907811	Washer [for ES, BK]
44	2137381	Line filter (ESD-R25D) [for ES, VS, BK, KS, SA, ZS]
		UNIT MECHANISM
1	4468942	Unit plate assy
2	4040622	DC motor assy
3	4418005	PS washer
4	3976432	Send gear
5	4850631	DC motor kit assy
6	8711103	Pan head screw (2 ϕ x 3)
7	2780071	Micro switch
		for ACCESSORIES
⚠	2667922	Siemens plug [for EW]
	2757528	FM antenna [except ZS]
	4023261	AM loop antenna assy
	2589364	Remoto control unit (RB-W50) [for US, CS]
	2589365	Remoto control unit (RB-W50) [except US, CS]
	4849091	Battery cover
		CASSETTE CHASSIS
1	4846531	Reel (L) assy
2	4847531	Reel (R) assy
3	4846831	Mechanism base assy
4	4846451	FR arm assy
5	4846001	FR gear
6	4846031	FR arm A spring
7	4846231	FR arm B spring
8	4846061	REW gear
9	4846601	Trigger arm (FR-B)
10	4846991	FR cam gear
11	4854061	Washer
12	4853601	Reel spring
13	4846631	Reel cap
14	4816011	Washer
15	4853641	Brake arm
16	4846021	Brake spring
17	4846522	Clutch assy
18	4846801	FR lever
19	4851801	FR lever spring (C)
20	4847771	RV lever collar
21	8691106	BT bind head screw (2 ϕ x 6)
22	4846501	RV lever assy (A)
23	4846571	FR shift arm
24	4846671	Select arm
25	4845901	FR shift spring
26	4847001	PL cam gear

SYMBOL No.	PART No.	DESCRIPTION
27	4846491	Trigger arm assy
28	4845921	PL trigger spring
29	4833591	Tapping screw (2 ϕ x 5)
30	4846581	Housing (R)
31	4846591	Housing (L)
32	4816041	Screw (2 ϕ x 4)
33	4846741	PLAY gear arm
34	4846111	PLAY gear
35	4846301	PL arm collar
36	4816061	Screw (2 ϕ x 5)
37	4845891	PLAY arm spring
38	4846051	Cassette guide
39	4846681	RV arm
40	4846971	Head chassis
41	4846611	Head chassis spring
42	4846411	Shift arm assy
43	7783501	Special screw
44	4845911	Shift arm spring
45	4846911	RV lever (B)
46	4846641	Tape guide (R)
47	4846851	Tape guide (L)
48	4845931	Tape guide spring
49	4846871	Playback head (rotation type) (for TAPE 1)
	4846882	Rotation head (R/P) assy (for TAPE 2)
50	4846432	P roller assy (R)
51	4846442	P roller assy (L)
52	4845941	P roller RA spring
53	4845961	P roller RB spring
54	4845951	P roller LA spring
55	4845971	P roller LB spring
56	4846562	Solenoid assy
57	4847351	Pan head screw (2 ϕ x 3)
58	4846541	Flywheel (RB)
59	4847221	Flywheel gear (B)
60	4846551	Flywheel (LB)
61	4846381	Polyslider washer (2.3 ϕ x 5 x 0.25)
62	4847561	Polyslider washer (2.6 ϕ x 4.7 x 0.25)
63	4846891	Nylon washer (2.4 ϕ x 5 x 0.5)
64	4846901	Nylon washer (2.1 ϕ x 5 x 0.5)
65	4846471	Clutch belt
66	4847211	Capstan spacer
67	4825251	Leaf switch
68	4853631	Motor assy
69	4853571	Motor screw
71	4853591	Washer (B)
72	4846962	SW protector
73	4846621	SW arm
74	4477801	Spring (plate)
75	4851781	REC switch
76	4846481	Reflective sensor
77	4847301	PLAY switch
78	4816051	Screw (2 ϕ x 4)
79	4847371	Bind tap tight screw (2 ϕ x 6)
80	4847341	Head P.W.B.
81	4853521	Belt (H)

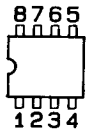
AN278



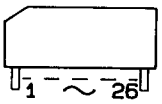
HD614042SF54
HD63A01Y0C60P
μPD7516HCW-287
μPD7516HCW-316



M5218P
NJM4558DM
μPC4570C



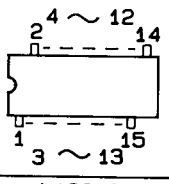
TM5060C



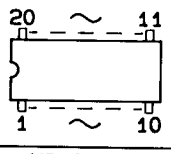
DTC124EST

KV1260

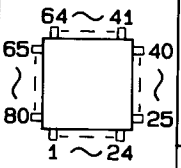
BA1332L



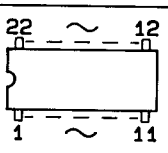
LA3246



HD49201A

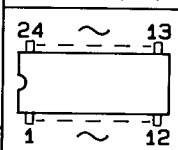


HA12086
HA12096

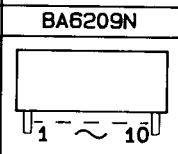


2SB1274 (Q/R)
2SB1274 (R)
2SD1913 (R)
2SD1913 (Q/R)

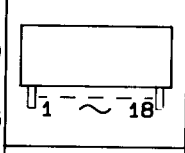
LC7217
LA1266
LA3240
HM6116FP-4



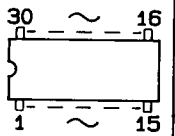
BA6209N



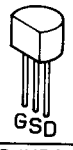
STK4192II



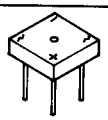
BA6352S
LC7821



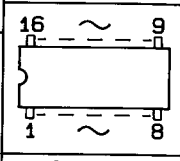
2SK104 (F)



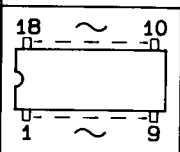
S4VB20



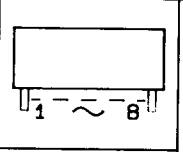
HD14053B
TC4028BP



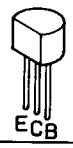
MSM58371



UPC1237H

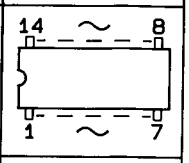


2SC1740S (S)
2SC1740LN (S)
2SC1741QR
2SC1213P (C)
2SA872E
2SA933S (R)
2SA933T (R)
2SD1111
2SD1468 (R)

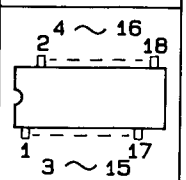


2SB562BTZ
2SD468CTZ

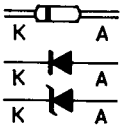
IR3702
μPC1290C



BA3812L



HZ-3A-2
HZ-4B-1
HZ-4B2
HZ-4C-3
HZ-5A-3
HZ5B
HZ-6B
HZ-6B-1
HZ7A
HZ-9C-1
HZ9C-11
HZ9B1
HZ-11A-1
HZ-12A-3
HZ-12C-3
1SS254
1K60R
RD27EB4
ERB12-01



WARNING LABEL·ETIQUETTE D'AVERTISSEMENT

CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE.

For Europe and Australia, etc.
Pour l'Europe et l'Australie, etc.

ADVARSEL:USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

For Sweden, Denmark, Norway Finland, and Switzerland
Pour Suède, Danemark, Norvège Finlande, et Suisse

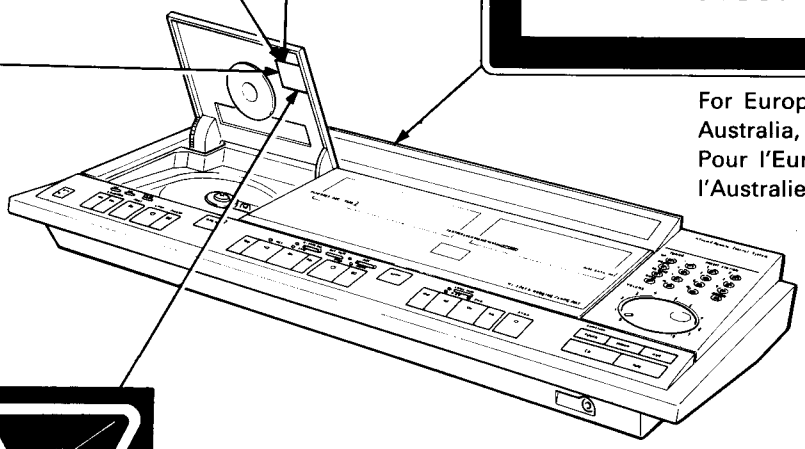
EXPLANATORY LABEL ON REAR-SIDE
ETIQUETTE EXPLICATIVE DU PANNEAU ARRIÈRE

CLASS 1
LASER PRODUCT

For Europe and Australia, etc.
Pour l'Europe et l'Australie, etc.

DANGER
Invisible laser radiation when open and inter lock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

For U.S.A
Pour les Etats Unis



CAUTION: HAZARDOUS LASER AND ELECTROMAGNETIC RADIATION WHEN OPEN AND INTERLOCK DEFEATED.
ATTENTION : RAYONNEMENT LASER ET ELECTROMAGNETIQUE DANGEREUX SI OUVERT AVEC L'ENCLENCHEMENT DE SECURITE ANNULE.

For Canada
Pour le Canada

THIS LASER COMPACT DISC PLAYER FUNCTIONS BY HELP OF INVISIBLE LASERLIGHT AND IS EQUIPPED WITH SAFETY-SWITCHES TO AVOID EXPOSURE WHEN DOOR IS OPEN AND SAFETY INTERLOCKS ARE DEFEATED. IT IS DANGEROUS TO SET SAFETYSWITCHES OUT OF FUNCTION.
THERE ARE NO USER'S SERVICEABLE PARTS INSIDE THE UNIT, LEAVE ALL SERVICE TO QUALIFIED SERVICE PERSONNEL.

CE LECTEUR DE DISQUE COMPACT FAIT APPEL A UN RAYON LASER INVISIBLE ET IL EST DOTE D'INTERRUPTEURS DE SECURITE PERMETTANT D'EVITER TOUTE EXPOSITION AU RAYON LORSQU'ON OUVRE LA PORTE ET QUE LES VERROUILLAGES DE SECURITE SONT DEBLOQUES. IL EST DANGEREUX DE MANIPULER LES INTERRUPTEURS DE SECURITE DE L'APPAREIL QUAND CE DERNIER N'EST PAS EN SERVICE.
L'APPAREIL NE RENFERME AUCUNE PIECE QUI PUISSE ETRE REPAREE PAR L'UTILISATEUR. ON CONFIERA DONC TOUS TRAVAUX DE REPARATION A UN PERSONNEL QUALIFIE.

Inside of the set is a laser component emitting a laser radiation over the limit for laser class 1.

Inuti apparaten finns en laserkomponent som avger laserstrålning över gränsen för laser klass 1.

HITACHI

HITACHI SALES EUROPA GmbH
Rungedamm 2,2050 Hamburg 80,
West Germany
Tel. 040-734 11-0

HITACHI SALES (U.K.) Ltd.
Hitachi House, Station Road, Hayes, Middlesex UB3 4DR, England
Tel. 01-848-8787

HITACHI SALES SCANDINAVIA AB
Rissneleden 8, Box 7138, 172-07 Sundbyberg, Sweden
Tel. 08-98 52 80

HITACHI SALES NORWAY A/S
P.O. Box 503, Oerebekk, 1620,
Gressvik, Norway
Tel. 032-28255

SUOMEN HITACHI OY
Takojankatsu 5, 15800 Lahti 80, Finland
Tel. (918) 44 241

HITACHI SALES A/S
Kuldyssen 13, DK-2630, Taastrup, Denmark
Tel. 02-999200

HITACHI SALES A.G.
Bahnhofstrasse, 19, 5600 Lenzburg, Switzerland
Tel. 064-513621

HITACHI SALES WARENHANDELS GMBH
A-1180/Wien, Kreuzgasse 27, Austria
Tel. 0222-421670

HITACHI SALES ITALIANA, S.P.A.
Via Cristoford Colombo 49, Trezzano sul naviglio (Milano), Italy
Tel. 44 59 031

HITACHI SALES BELGIUM S.A./N.V.
Chaussee de Namur, 56, B-1400 Nivelles, Belgium
Tel. (3267) 21-71-81, (3267) 21-79-81

HITACHI SALES IBERICA, S.A.
Gran Via Carlos Tercero, 101, 1-1, Barcelona-08028, Spain
Tel. 330-8652

HITACHI PRODUCTIONS MAROC ELECTRONIQUES DOMESTIQUES S.A.
Rue du Havre, Casablanca, Morocco
Tel. 30-73-68, 30-73-57

HITACHI CANARIAS S.A.
Calle San-Francisco No. 19, 38002, Santa Cruz de Tenerife Canary Islands
Tel. 24-64-98

HITACHI SALES (HELLAS) S.A.
1 10 Syngrou St., Athens, Greece
Tel. 9219082, 9233469

HITACHI SALES (MALAYSIA) SDN, BHD.
Wisma Hitachi. No. 2. Lorong 13/6A, 46200 Petaling Jaya. Malaysia
Tel. 7573455

HITACHI (SINGAPORE) PTE., LTD.
18 Pasir Panjang Road # 01-03 PSA Multi-Storey Complex. Singapore 0511
Tel. 2738102

HITACHI SALES (THAILAND) LTD.
2240-46, New Petchburi Road, Bangkapi, Hueykuang Bangkok, Thailand
Tel. 314-2741

HITACHI ELECTRIC SERVICE CO., (HONG KONG) LTD.
4th Floor Leun Tai Industrial Bldg., 72-76 Kwai Cheong Road Kwai Chung N.T., Hong Kong
Tel. 0-242976, 0-240126

HITACHI SALES AUSTRALIA PTY LTD.
153 Keys Road, Moorabbin, Victoria 3189 Australia
Tel. 555-8722

HITACHI SALES CORPORATION OF AMERICA
Eastern Regional Office
1290 Wall Street West, Lyndhurst, New Jersey 07071, U.S.A.
Tel. 201-935-8980

Mid-Western Regional Office
1400 Morse Ave., Elk Grove Village, Illinois 60007, U.S.A.
Tel. 312-593-1550

Southern Regional Office
510 Plaza Drive, College Park, Georgia 30349, U.S.A.
Tel. 404-763-0360

Headquaters Western Regional Office
401 West Artesia Boulevard, Compton, California 90220 U.S.A.
Tel. 213-537-8383

HITACHI SALES CORPORATION OF HAWAII. INC.
3219 Koapaka Street. Honolulu, Hawaii 96819, U.S.A.
Tel. 808-836-3621

HITACHI (HSC) CANADA INC.
3300 Trans-Canada Highway, Pointe Claire, Quebec, H9R 1B1, Canada
Tel. 514-697-9150

Hitachi Sales Centroamericana, S.A.
HITACHI ELECTRONICA CENTROAMERICANA S.A.
San Rafael de Escazu, (Apartado 10272), San Jose, Costa Rica
Tel. 28-20-11, 28-00-37

Hitachi Sales Corporation de Panama, S.A.
INTERNATIONAL HITACHI SALES PANAMA, LTD.
PRODUCTOS HITACHI, S.A.
Apartado 7657 Panama 5 Panama City, Rep. of Panama
Tel. 61-3100, 61-4305

HITACHI-FRANCE (RADIO-T.V. ELECTRO-MENAGER) S.A.
95-101 Rue Charles Michels,
93200 SAINT-DENIS,
France
Tel. 4821 6015

HITACHI LTD. TOKYO JAPAN
Head Office: THE HITACHI ATAGO BLDG
No. 15-12, 2-Chome Nishi-Shinbashi
Minato-ku, Tokyo 105, Japan
Tel. Tokyo (03) 502-2111

MX-W50 TY No. 571EF

Printed in Japan (Ho)